

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



# Grand Rapids Growers Assn.

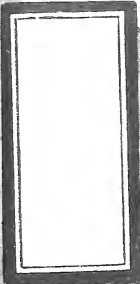
*Specialists in Seeds for the*

## Market Garden

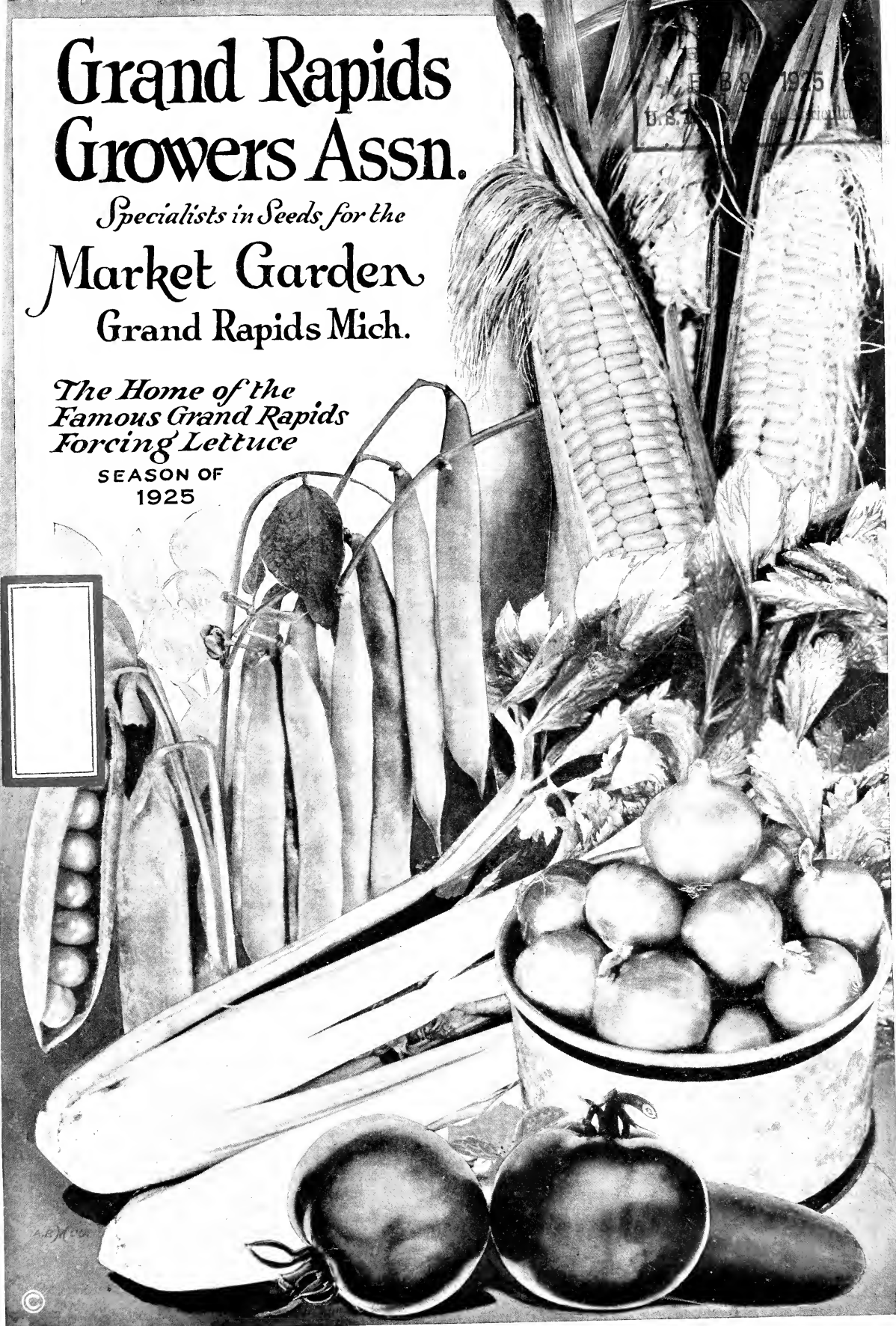
Grand Rapids Mich.

*The Home of the  
Famous Grand Rapids  
Forcing Lettuce*

SEASON OF  
1925



U.S. PATENT OFFICE  
1925



# ANNOUNCEMENT 1925

THE Grand Rapids Growers Association is a co-operative buying and selling organization, establishing an effective sales service for distributing all products from the Hot-house, Farm and Garden. The part the Association plays in production is in its Seed Department, where it handles Pure Field and Garden Seeds. We solicit the patronage of all who appreciate quality.

Never in the history of our country have the growers so felt the necessity of united effort in the production and distribution of their products, and in using their collective purchasing power.

We take pleasure in presenting to you our Sixth Annual Catalog for your careful consideration.

## THE GRAND RAPIDS GROWERS ASSOCIATION

R. Yonker, President  
T. E. Graham, Vice-President  
Rudolph Zant, Secretary-Treasurer  
P. D. Leavenworth, Manager

**Special Notice** We have made a specialty of supplying Market Gardeners (both up-land and muck) with best strains of seeds for their purpose, and our thirty years of experience has given us some knowledge of their needs.

### How to Order and Remit—Read Carefully

Write your name, postoffice, shipping point or nearest express office, your county and state.

**PREPAID ORDERS.** We prepay postage on all vegetable and flower seeds, in packets, ounces, quarter pounds, half pounds and pounds, at prices quoted herein, to any point in the United States, when cash accompanies the order. We do not prepay postage on Beans, Corn, Peas, Farm Seeds, Onion Sets, Potatoes, Bulbs, Fertilizer, etc. If wanted by Parcel Post, add postage. See Postal rates on this page.

**BULK ORDERS OF SMALL SEEDS.** We will pay the Freight or Express Charges, our option, to any point in the United States on all orders amounting to Ten Dollars or more, provided the order is for small seeds only, when cash accompanies order. This does not include Peas, Beans, Corn, Potatoes, Onion Sets, Clover Seed, Grass Seed, Vetch, Rape, Implements, Fertilizers, Insecticides, Bulbs, Cow Peas or Grain of any kind which are shipped at purchaser's expense. If there is only a slight difference between freight and express charges, we will send by express in each instance. Remittances should be made by Postal Money Order, Express Money Order, Certified Check, or by Registered Letter.

**C. O. D. ORDERS.** If goods are to be sent C. O. D. or Sight Draft Bill of Lading Attached, 25 per cent of the amount must accompany the order. Parties buying large quantities of any one variety will be quoted special prices on application. All prices are net, and while we do not think there will be any serious change, are made subject to change without notice.

**PARCEL POST WEIGHT LIMIT.** The weight limit within the first, second and third zones is now 70 pounds, and within all other zones 50 pounds. Shipments of 20 pounds or over are cheaper if sent by Express beyond the third zone.

#### DOMESTIC PARCEL POST RATES WITHIN U. S. AND POSSESSIONS, RATES FROM GRAND RAPIDS, MICH.

	1st lb. or Fraction	Ea. add. lb. or Fraction
1st Zone, within 50 miles of Grand Rapids.....	5c	1c
2nd Zone, within 150 miles of Grand Rapids.....	5c	1c
3rd Zone, within 300 miles of Grand Rapids.....	6c	2c
4th Zone, within 600 miles of Grand Rapids.....	7c	4c
5th Zone, within 1000 miles of Grand Rapids.....	8c	6c
6th Zone, within 1400 miles of Grand Rapids.....	9c	8c
7th Zone, within 1800 miles of Grand Rapids.....	11c	10c
8th Zone, all over 1800 miles of Grand Rapids....	12c	12c

If in doubt obtain your zone rate from your postmaster.

The seeds offered in this catalog have been carefully grown, selected, cleaned and tested for germination and we believe them to be first-class, but as so many conditions enter into making a crop, we give no warranty, either express or implied, as to description, purity or productiveness, and will not be responsible for the crop. If the purchaser does not accept the goods on these terms, they are to be returned at once, and if paid for, the money will be refunded.

## The Grand Rapids Growers Association

COR. WEALTHY ST., AND IONIA AVE., S. W.

Grand Rapids, Michigan

### INDEX

Alfalfa .....	24	Corn, Sweet .....	4, 12	Onion Sets .....	16
Asparagus .....	2, 8	Corn, Fodder .....	28	Orchard Grass .....	25
Asparagus Roots .....	8	Corn Salad .....	9	Parsnip .....	16
Beans .....	2, 8	Cress .....	9	Parsley .....	16
Beets .....	9	Cucumber .....	4, 11	Peas .....	6, 17
Beets, Sugar .....	9	Egg Plant .....	13	Peppers .....	6, 18
Beets, Mangel Wurzel .....	9	Endive .....	13	Pumpkin .....	18
Beets, Swiss Chard .....	9	Fertilizer .....	29	Radish .....	6, 19
Blue Grass, Kentucky .....	25	Flower Seeds .....	23	Red Top .....	25
Blue Grass, Canadian .....	25	Herbs .....	22	Rhubarb .....	20
Brussels Sprouts .....	9	Insecticide .....	30, 31	Rutabaga .....	18
Cabbage .....	2, 10	Irrigation Equipment .....	32, 33	Salsify .....	21
Cabbage, Chinese .....	3, 10	Kale .....	13	Sand Vetch .....	27
Calliflower .....	11	Kohl Rabi .....	13	Splnach .....	20
Carrots .....	11	Leek .....	13	Squash .....	20
Celery .....	1, 2, 3, 12	Lettuce .....	5, 14	Sudan Grass .....	27
Clover, Alsike .....	26	Melon, Musk .....	15	Timothy .....	27
Clover, Mammoth .....	26	Melon, Water .....	15	Tobacco .....	21
Clover, Medium .....	26	Millet .....	27	Tomatoes .....	7, 21
Clover, Sweet W.B. ....	26	Onion .....	4, 16	Turnips .....	22

# CELERY MICHIGAN AGRICULTURAL COLLEGE STRAIN (Yellows-Resistant)

## Golden Self-Blanching

This strain of Golden Self-Blanching celery has been produced at the Michigan Agricultural College as a result of several years' investigation and test by the Department of Botany of selections made in 1919 for resistance to Root Rot or Yellows. This disease is also known as "Sickness," "Stunting Disease," and "Crown Rot." All of this seed is from plants that are directly descended from a single plant selection made in 1919 at Kalamazoo from a field where the entire crop with the exception of five plants was destroyed by the Yellows disease.

Seed was produced by this single mother plant in the spring of 1920 and was tested in sick soil both in the greenhouse and in the field in comparison with the ordinary commercial varieties of yellow celery. From the beginning the progeny of this plant has shown marked resistance to Yellows whereas the ordinary varieties are highly susceptible. In 1921 a field test was made at Kalamazoo on muck soil where it had been impossible to produce a crop of yellow celery for several years. The Michigan Agricultural College strain was tested against the best commercial sorts of yellow celery. The season was extremely favorable for the development of the Yellows disease and as a result the commercial varieties of yellow failed while the M.A.C. strain gave a satisfactory crop. The illustration on this page shows the favorable appearance of the row of the M.A.C. strain and the almost total failure of the commercial yellow. The showing that this selected strain has made in resisting the attack of the Yellows has been constantly maintained in all the tests in diseased soil.

Production of yellow celery in Michigan is now restricted to a few favorable sections. While the disease situation in other states has not been so well surveyed as in Michigan, the Yellows disease is known to occur in Ohio, Indiana, New York, New Jersey, Connecticut, Minnesota, Colorado and Canada and may be expected wherever yellow celery is grown under warm soil conditions.

In most of the celery districts of the state, particularly those regions where more than one crop is produced each year, yellow celery cannot successfully be grown in hot seasons. This failure of yellow celery is not due to the hot weather but to the attack of the fungus that causes the Yellows disease or "Sickness." This fungus lives in the soil from year to year so that the only method of combatting the disease is by the use of resistant varieties. Plants affected with the disease are usually stunted, the roots have a red streak running through the center, the crown is often rotted and the leaves turn a golden yellow color. This yellowing of the leaves is a characteristic that has given rise to the name of the disease—"Yellows." When it was learned that yellow celery could no longer be grown in affected areas growers were forced to substitute the green varieties which are very tolerant or resistant to Yellows. While desirable as dirt-bleached winter celery the green varieties are not popular for a fancy market. The reputation of Michigan celery has suffered immensely with the decrease in the production of the Golden Self-Blanching variety. The market demands are for the attractive bunch that the well-bleached yellow sorts present.

The M.A.C. Strain of Yellows-Resistant Golden Self-Blanching is identical in type with the old-fashioned yellow celery so extensively produced a few years ago but now almost superseded by green varieties that are resistant to Yellows. This new selection is practically a pure line of Golden Self-Blanching with resistance to the soil sickness, or Yellows, as an added quality. This variety ships well, presenting a compact, well-bleached bunch, keeps well in storage and the beautiful golden-yellow color in the leaves and creamy-white color of the stalks is unsurpassed by any other variety. It is not a quick-bleaching celery with soft stalks like some of the newer yellow sorts. Growers who are familiar with the old golden-yellow will recognize in this new strain all the good qualities that made Michigan celery famous before disease curtailed production of the yellow sorts.

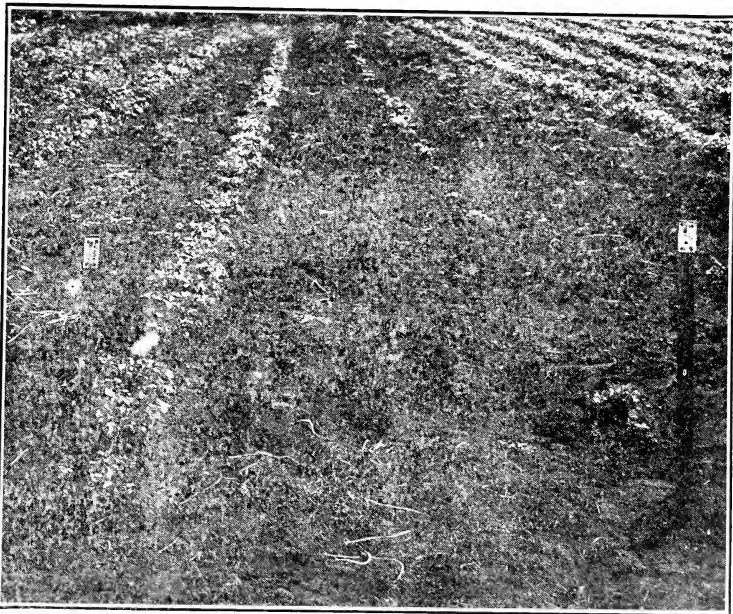
The M.A.C. strain is resistant only to the Yellows disease and must be sprayed to protect it against the blights that affect the foliage and stalks.

The seed offered for sale has been produced in co-operation with the United States Department of Agriculture at Chula Vista, California. Seed for increase is furnished by the Department of Botany from their own selections and sent to California for increase by Government experts.

This seed is marketed under co-operative agreement at a price which is consistent with the cost of production, handling, and the additional expense of keeping up the selection work each year and the production of high-grade, resistant seed. Price, ½ oz., \$2.00; oz., \$4.00; ¼ lb., \$15.00; 1 lb., \$50.00, post-paid in double sealed packets packed at the Department of Botany, Michigan Agricultural College, East Lansing.

For the 1925 season, in order to allow widest distribution of this seed and test under all conditions, the plant pathologists request growers to limit their purchases to the small quantities offered. Identical materials will be available for large commercial plantings in 1926.

**GRAND RAPIDS GROWERS ASSOCIATION**  
(Sole Distributors)



M.A.C. Commercial  
M.A.C. strain of Golden Self-Blanching Celery, Yellows-Resistant, being tested in comparison with ordinary commercial Golden. The rows in the background are green types which have made a poor growth because of disease. (Test at Kalamazoo, 1921.)



M.A.C. 1                      Commercial 2                      M.A.C. 3                      Commercial 4  
**Fig. 2. Typical greenhouse test with M.A.C. strain and commercial varieties.**  
 Rows 1 and 3 are the M.A.C. strain.

The attention of growers who prefer an easy bleaching type of celery is directed to the new Curly-Leaf, Easy Bleaching Celery, Michigan Agricultural College Strain.

## Curly Leaf Easy Bleaching M. A. C. Strain

This is a new selection from Easy Bleaching celery possessing all of the qualities of that well-known strain, and in addition presenting an ex-

ceptionally handsome appearance due to its curled and ruffled leaves. This seed is a pedigreed strain produced in California by the U. S. Department of Agriculture from seed furnished by the Department of Botany, Michigan Agricultural College. This seed is especially recommended for use on diseased soil where Golden Self-Blanching celery does poorly and where a green celery is suitable to market demands. It can readily be recognized even in the seedling stage and when this seed becomes in general use, substitutions of other varieties can readily be detected. **Price, ½ oz., \$1.00; 1 oz., \$1.50; ¼ lb., \$6.00; 1 lb., \$26.00.**

# Specialties for Market Gardeners

## Washington Asparagus

The new rust-resistant Asparagus was developed by the United States Department of Agriculture at Washington. It is a distinct and very valuable variety. Not only highly resistant to rust and all fungous diseases, but a heavy yielder of large, dark green, straight shoots. The tips are tight and firm and do not begin to branch until well out of the ground. **Pedigreed Seed, Price, ounce, 40c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.**

## Unrivalled Wax Beans

Small plant, very early and great yielder. Pods about five and one-half inches long. Somewhat curved, semi-flat, fleshy and very tender and stringless. Color pale yellow. **Quart, 50c; peck, \$3.25; bushel, \$12.00, postpaid.**

## Early Jersey Wakefield Cabbage

(Special.) Our Jersey Wakefield Cabbage for the coming year is the same stock we sold last season. Therefore, it has been tested and we can guarantee

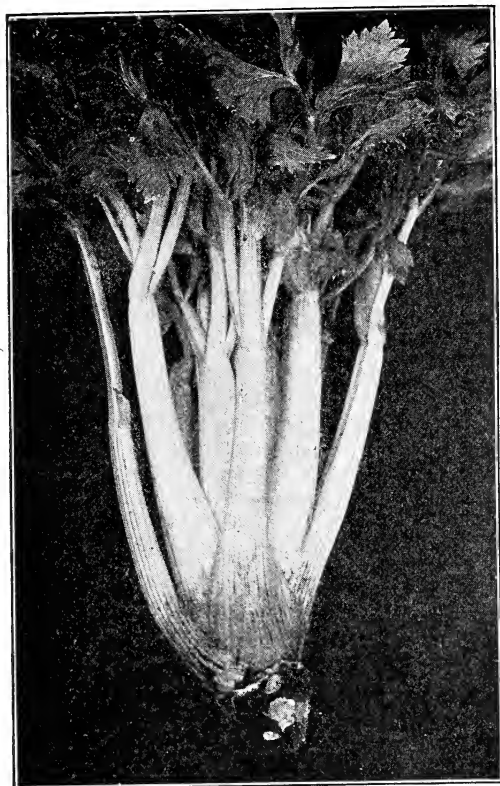
it to be exceptionally fine. The very earliest strain of this early variety, heads very uniform in shape and size; small, all conical and firm and hard. Just the right size for retail trade. **Oz., 25c; ¼ lb., 80c; 1 lb., \$2.75, postpaid.**

## Golden Acre Cabbage

A new, round-headed, early cabbage. Heads round, very hard. Every head just alike and all mature at practically the same time. **As early as the Jersey Wakefield.** Some claim it to be a week earlier.

This variety matures two or three weeks earlier than the Copenhagen Market, but is otherwise quite similar. Owing to the earliness and remarkable uniformity, Golden Acre will prove to be the most profitable early Cabbage for the Market Gardeners. We have a limited amount of this seed to offer. Subject to being sold out. **Price, ounce, \$1.60; ¼ lb., \$5.00; 1 lb., \$18.00.**

Mr. W. J. Ritterskamp, a large, up-to-date Market Gardener at Harbor Springs, Michigan, writes that "The new extra early Golden Acre Cabbage is one of the best new things that has come out. Heads round like the Danish Ballhead, average about two pounds to the head. Very early and a rich golden color."



The New Golden Self-Blanching Celery

seed grown in 1923, which will be tested next season and will be for sale the following year if all right. Price, \$1.00 per oz.; \$3.50 per ¼ lb.; \$7.00 per ½ lb.; \$14.00 per lb., postpaid.

**Golden Plume** The grandest new variety introduced in many years. It was the sensation of the season last summer. It seems to be an intermediate between the Golden Self Blanching and Easy Bleaching. While it is a yellow celery, it has a lighter shade of yellow than the Golden Self Blanching. Plant is a more vigorous grower, nearly as early, stalks are thicker and not quite so flat as our New Golden Self Blanching which it resembles. Bleaches easily and does not become soft after bleaching. Seed is very pure, no green stalks or off types appearing and no hollow stalks. Plants very large and will turn out more boxes to the acre than any variety grown. While the price of the seed is high, your investment for an acre of the Golden Plume is not high, considering the quality and price the grower obtains for the product. We will have a limited quantity of 1924 grown seed to offer subject to germination test. Price, \$3.25 per oz.; \$12.50 per ¼ lb.; \$25.00 per ½ lb.; \$50.00 per lb., postpaid.

**Pride of the Market** (Special.) A dwarf thick-stalked variety, vigorous grower, not easily blighted, and yields about as many boxes per acre as the White Solid, but not so good a keeper, and should be marketed after the Golden Self Blanching and before the White Solid. Our seed is grown by the originator. Oz., \$1.50; ¼ lb., \$5.00; 1 lb., \$20.00.

## Chinese or Celery Cabbage

This new vegetable is becoming more popular every year and has generally been a money-maker for the market gardener. It has a delicate cabbage flavor, much milder than cabbage. The outer stalk may be eaten with salt like celery, or it makes a very delicious salad; can be used for cold slaw, or cooked like cabbage or used as spinach. The seed should not be sown till June or July, as the early sowing generally runs up to seed. They should be transplanted in rows about twenty inches apart and twelve inches apart in the row. The seed we offer was tested last season and we can guarantee it to be true to type and of the best quality.

**Chihili** This variety gives the best satisfaction here, especially when grown on muck. The heads are long, about sixteen inches, rather slim, coming to a point at the peak. Color a very dark bluish green, with the inner leaves and stalks blanched to a beautiful snow white. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

# Celery

## The New Golden Self Blanching

(Special.) This new type of Golden is grown in France, and in some ways seems to be an improvement on the old Paris Golden Self Blanching. It is a longer stalk and more vigorous and rapid grower, and not so badly affected by blight or disease. The plant seems to be an intermediate between the old Golden and Easy Bleaching and is probably the result of a cross between these two varieties, as was the new Golden Plume. It can be grown on muck, which will not grow the old Paris Golden Self Blanching either on account of exhausted condition of the soil or the soil being too badly infected with disease spores. Makes a magnificent growth of tall, broad, flat stalks of a lighter shade of yellow. For an early Celery to market in August or September, it seems to be fine, and for that purpose it appears now to be a valuable addition to the Celery family. If seed is sown later in the open ground and transplanted in July or August, so that plant is not over-ripe when trenched, it will come out crisp and hard up to the first of January. This Celery has proven its value and many prefer it to even the high-priced Golden Plume. Price, oz., \$1.25; ¼ lb., \$4.50; ½ lb., \$8.00; 1 lb., \$16.00.

**Easy Bleaching** (Special.) Our strain of this valuable variety is superior to most strains from the fact that it all bleaches evenly, leaving no green, unbleached stalks. Does not become soft after bleaching, but remains firm, brittle and sweet. The stalks are very thick and quite tall, producing more eatable celery to the plant than any sort on the market. It is about two weeks later than the Golden Self Blanching, and may be used either for early or late celery. When grown for late celery, the seed should be sown later and transplanted from the middle to the last of July, and when trenched with dirt will keep till January and come out of the trenches firm and brittle. It has no superior as to eating quality or flavor. It is almost immune to blight and no crop has ever been lost from disease. This seed is eastern grown and is produced by an old celery grower who guarantees it to be the finest type of this grand variety. The seed we offer was grown in 1922 and has been tested by crop grown in the field. We have new



J.B.R.S.Co.

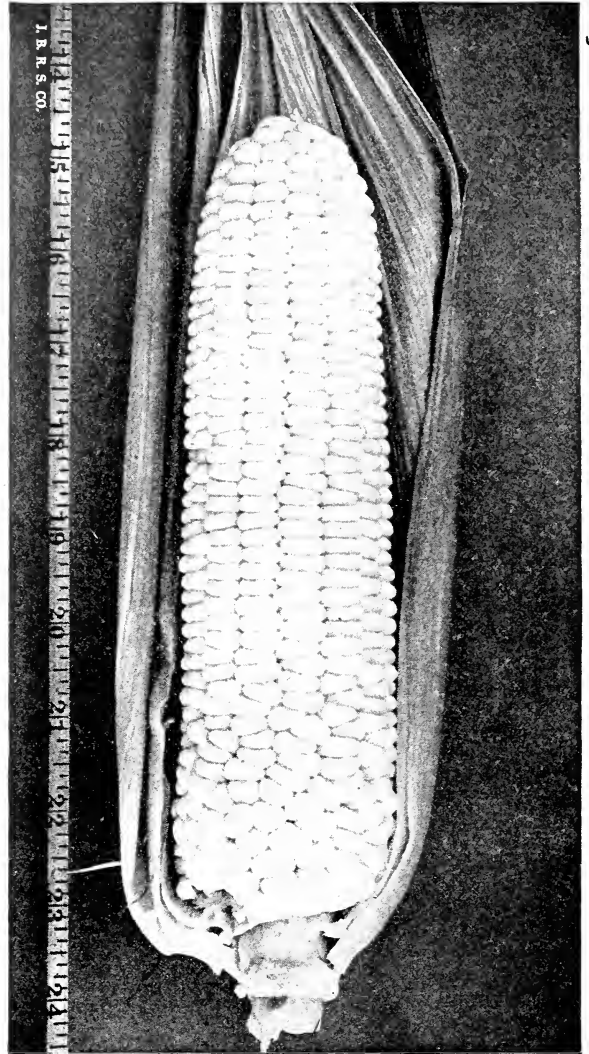
Chinese or Celery Cabbage, Pe-Tsal

## Sweet Corn

**Pink Cob Cory** (Special.) The earliest corn in existence. A week earlier than the Early White Cob Cory. Stalks short; ears close to the ground. Cob when ripe a bright pink, tinging the grain a red-dish pink. Kernels white when ready for use. Quart, 50c; peck, \$3.50; bu., \$12.00.

**Bantam Evergreen** (Special.) This new variety combines all of the good qualities of the Golden Bantam and the Stowell's Evergreen. It has the bright golden color and tender kernels of the Golden Bantam and the flavor and sweetness of the Stowell's Evergreen. Ears much larger than the Bantam, but not quite as large as the Evergreen. Much earlier than Evergreen. Stalks are full leaved and usually bear two well-developed ears. Not postpaid, price, qt., 50c; pk., \$3.50; bu., \$12.00.

**Whipple's Early** Said to be nearly as early as Mammoth White Cory and as large as the Stowell's Evergreen. Ears have sixteen to twenty rows of kernels, which are like Evergreen, long and narrow. They are very tender, sweet and delicious. The ears are seven to eight inches long and filled with kernels to the top. Earlier than Howling Mob. Stalks are tall and the majority will grow two good ears almost identical in size. Every market gardener should try it. Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.



Whipple's Early Sweet Corn



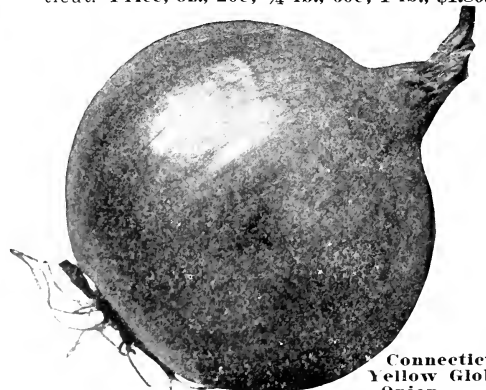
Grand Rapids Forcing Cucumber

## Grand Rapids Forcing Cucumber

A selection from the old Rawson's Forcing White Spine Cucumber. One of our growers found one vine which differed from the others in bearing a heavier crop of superior cucumbers. Superior both in shape and color. By years of careful selection he has developed the present Grand Rapids Forcing Cucumber. It is a very heavy cropper. Fruit very symmetrical and beautiful in color, and breeds true to type. Price, oz., \$5.00, postpaid.

## Connecticut Yellow Globe Onions

Onions are round, globe shaped. Not so long as the Southport, but said to be much better keepers. Very few stiff necks, rich yellow color. Will keep well into the spring months. Seed grown in Connecticut. Price, oz., 20c; ¼ lb., 60c; 1 lb., \$1.80.



Connecticut Yellow Globe Onion



# Lettuce

## Washington Strain of Grand Rapids Forcing

(Special.) This splendid strain was first produced by plant selection by the honored W. W. Tracy of the Agricultural Department at Washington. Mr. Yonkers procured some from Eugene Davis, sent him by Mr. Tracy. Mr. Yonkers, by careful plant selection, has kept it up to its original purity. It is absolutely true to type and is more like the original Grand Rapids Forcing as it came from the hands of Eugene Davis. Mr. Yonkers is well qualified to continue the breeding of this variety and can be depended upon to keep it up to its present high standard. There are very few if any sports. Color a light green; heads very heavy; leaf crisp, tender and curly; quality of the best. We are sold out on home-grown seed of this strain, and on account of climatic conditions we have given up the idea of growing the seed here, as the yield is unsatisfactory; but shall grow our stock seed in the greenhouse

and send to one of the best Lettuce seed growers on the Coast to grow the seed crop. We have a good supply of seed grown by this grower, for which we furnished the stock seed last spring, grown this past summer, and as the yield was so



Washington Strain of Grand Rapids Forcing Lettuce

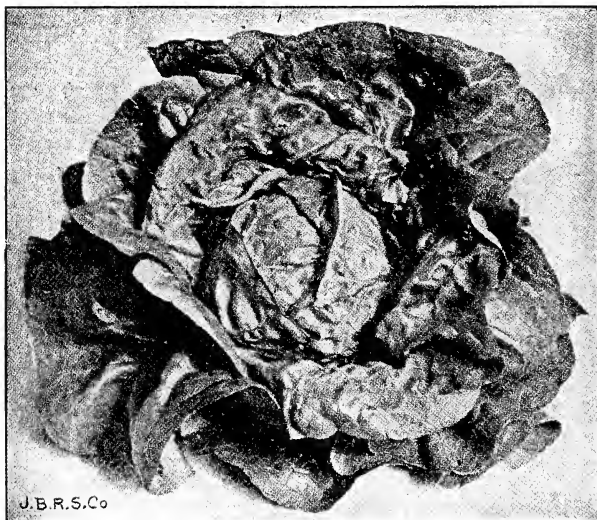
much larger than last year, we can reduce the price very materially. The seed is now being tested in our Greenhouses and as soon as the crop matures, will be ready for the Market. Price, oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

## Unrivalled or Green Leaved Big Boston

French Grown. We have a supply of this seed coming from Paris, France, but will not sell it until it is tested by having crop grown early next spring. Unrivalled heads better in hot weather than Big Boston, which it resembles, but does not have the red tinge. The heads are firm and of high quality. Price, oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

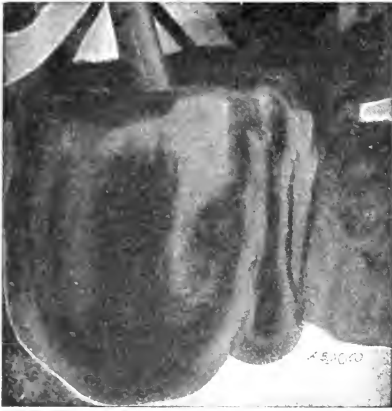
**Big Boston** (Special.) Our Big Boston Lettuce Seed is grown for us by one of the most careful firms of seed growers in the world. They take the utmost pains in pedigree breeding from individual plant selection. Their Big Boston does not run to seed and makes very large, firm heads, which blanch to a beautiful golden color, and every plant makes a head. It heads best in the cool weather of early spring and late fall. We do not recommend it for the hot summer months. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**All Seasons** green, leaves rather thick but blanch to a beautiful golden yellow. This variety wants hot weather to head well and is not satisfactory for early spring crop. Postpaid, oz., 20c; ¼ lb., 60c; 1 lb., \$2.00.



J.B.R.S.Co

Big Boston Lettuce



Harris' Earliest Pepper

## Peppers

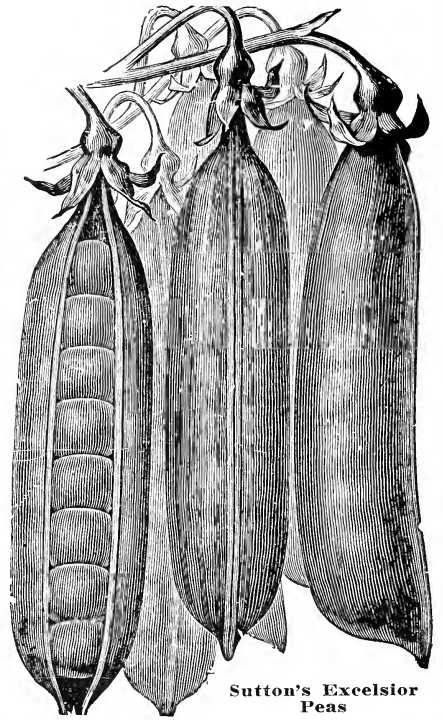
### Harris' Earliest

(Special.) The earliest large pepper grown. The early fruits always bring the price. Plant dwarf, compact in habit of growth, most prolific. Peppers bell shaped, about four inches long. Mild and sweet. The plants are literally covered with fruit. There are often a dozen large, ripe peppers on a plant at one time, and many green ones. They can be planted more closely together than other varieties, and an immense number can be produced on a small plot of ground. **Oz., 60c; ¼ lb., \$2.00; 1 lb., \$7.00, postpaid.**

**World Beater** (Special.) The most prolific, large pepper. Fruit very large, about five inches long. Flesh thick, mild and sweet. Pepper tapering and of a bright ruby red color when ripe and very attractive. **Price, postpaid, oz., 50c; ¼ lb., \$1.75; 1 lb., \$6.00.**

## Peas

**Dark Podded Sutton's Excelsior** (Special.) An extra early, dwarf variety, of highest quality. Height fourteen inches, foliage dark green. Vine stout and healthy. Pods three and one-half inches long, straight, round and square ended, containing six to eight large, dark green peas. Exceedingly productive. **Price, postpaid, qt., 40c; pk., \$3.00; bu., \$11.00.**



Sutton's Excelsior Peas

## Improved Laxtonian

(Special.) The best of the Laxtonian type. Second early. A little earlier than the Gradus. Vine 16 inches high, sturdy, dark green and productive; pods dark green, four inches, broad, containing eight large peas of excellent quality. The best second early big-podded sort. **Price, not postpaid, qt., 50c; pk., \$3.25; bu., \$12.00.**

## Dwarf Telephone

(Special.) A splendid main crop pea, coming between the Telephone and Stratagem. Of the Stratagem type, but a heavier yielder. Height, two and one-half feet. Foliage very heavy, sturdy and dark green. Pods four and one-half inches long, dark green, broad, straight and pointed, containing nine large, medium dark green peas of the best quality. **Price, not postpaid, qt., 50c; pk., \$3.00; bu., \$11.00.**

## Radishes

### Grand Rapids Forcing

(Special.) This seed is saved from selected bulbs of the best type of Globe Radish. The seed is grown on land free from volunteer radishes and is very pure. Tops are very small, in fact, radishes are ready to pull before you realize it, on account of the small tops. Every seed makes a handsome dark red globe-shaped bottom, which rarely becomes pithy. They should not be forced with too much heat as it causes some to split. **Price, postpaid, oz., 10c; ¼ lb., 35c; 1 lb., \$1.25.**



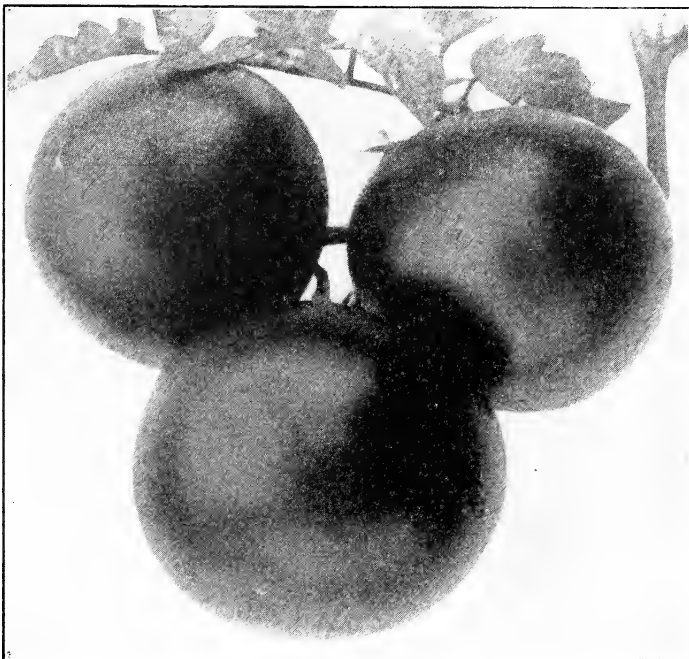
J.E.R.S.Co.

Grand Rapids Forcing Radishes

# Tomatoes

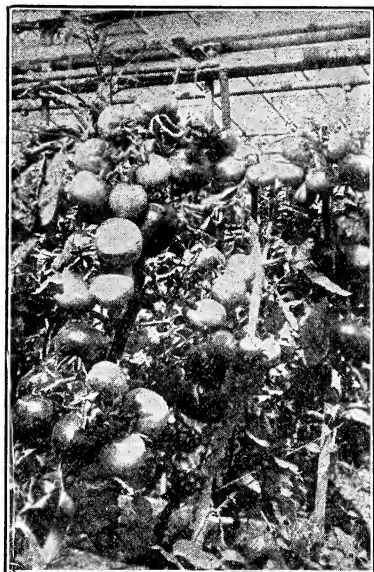
## Grand Rapids Forcing

This variety was originated by the late Mr. John Wieringa. The Grand Rapids Forcing is as great an acquisition to the line of forcing vegetables as was the Grand Rapids Forcing Lettuce. The intense sexual vigor of the plant causes a great production of pollen, and insures an immense setting of fruit. It is probably the only tomato that is self-fertilizing. Plant is a vigorous robust grower, and should be trimmed to about six feet in height. The fruit is a good red color, fair size, firm and meaty. Skin is tough and it will stand shipping for long distances. Under favorable growing conditions each plant should produce eight pounds of marketable fruit. Our seed is saved from greenhouse grown tomatoes. **Postpaid, oz., \$2.00; ¼ lb., \$6.00; ½ lb., \$9.00; 1 lb., \$18.00.**



Grand Rapids Forcing Tomatoes

**Wayhead** A potato - leaved Earliana. Earlier than the Earliana. Smooth red fruit and very prolific; has the heavy yielding qualities of the Earliana and fruit much better. **Oz., 75c; ¼ lb., \$2.75; 1 lb., \$10.00, postpaid.**

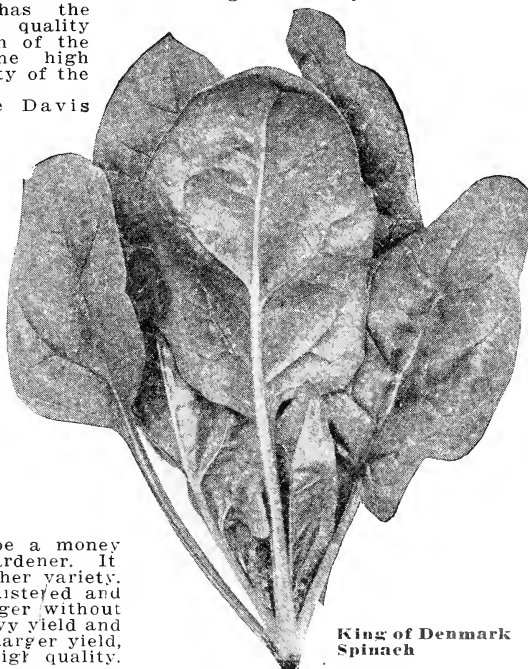


The Ideal Tomato

**Red Head** A large globe-shape, bright scarlet Tomato, coming in with Chalk's Early Jewel, but as large as the Stone. Very solid, better yielder than either Stone or Greater Baltimore. One canner reported that last year it yielded 50 per cent more than either of the above. Mr. Ritterskamp writes that the Red Head Tomato is the best variety on the market. For four years, it has proven to be the earliest large, smooth, red Tomato of the highest quality and last year 95 per cent of my entire planting was Red Head. Mr. Langdon told me that there was very little, if any, difference in earliness between his line bred Earliana and the Red Head in his trial ground. **Oz., 60c; ¼ lb., \$2.25; 1 lb., \$8.00, postpaid.**

**The Ideal** A new Forcing variety. Mr. John Nellis of Grand Rapids, Michigan, originated this Ideal Forcing Tomato. It is the result of crossing the Bonny Best with the Comet, and has the heavy yielding quality and tough skin of the Comet and the high color and quality of the Bonny Best.

Mr. Eugene Davis and Professor Waide, now of Ohio, selected the original parent of the Ideal Tomato, and Mr. Nellis has selected and reselected the plants until it has arrived at a high state of purity



King of Denmark Spinach

and breeds absolutely true to type. The plant does not grow so tall as the Grand Rapids Forcing, but will yield as many pounds per plant. It has no green, unripe core, dark red in color, not an acid fruit but excellent quality, and is a larger Tomato and a splendid shipper. It has been shipped to Texas and arrived in perfect condition. We have a limited amount of seed and cannot sell more than four ounces to a customer. **Packet, 100 seeds, 50c; ½ oz., \$3.00; 1 oz., \$5.00, postpaid.**

## Spinach

**King of Denmark** This new Spinach will be a money maker for the Market Gardener. It will stand longer without going to seed than any other variety. The leaves are very large and rounded, somewhat blistered and very deep green in color. Will stand two weeks longer without running up to seed and keeps on growing giving a heavy yield and prolonging the season for marketing. In addition to larger yield, is a splendid seller on account of larger leaves and high quality. **Price, oz., 10c; ¼ lb., 15c; 1 lb., 50c, postpaid.**

## Asparagus

**CULTURAL DIRECTIONS.** One ounce of seed will sow 50 feet of drill and produce about 200 plants. If starting from seed plow or spade under a liberal amount of **Pulverized Hen Manure**, drag or rake the seed bed, breaking all lumps, and making the soil fine. Then apply a good top dressing of **Hen Manure**, raking it in well. Drill the seed in rows about eighteen inches apart, covering seed one inch. When the plants are up cultivate well, keep free from weeds and they should be all right to transplant to permanent beds the following spring. The soil cannot be made too rich. Use well rotted stable manure or **Pulverized Hen Manure**, and mix well with the soil. For home garden have the rows two or three feet apart and a foot apart in the row. For field culture, the rows should be four feet apart. Make broad trenches about a foot deep and fill in about three or four inches with well rotted stable manure, put two inches of dirt on top of manure, then set the plants, spreading the roots and cover with an inch of soil. As the plants grow, gradually fill the trenches till the bed or field is level. Do not cut the plants till the third year. Every fall before the seed is ripe, cut tops and burn them, and give good top dressing of manure. Remember, the bed well planted will last for at least twenty years. Treat it well.

**PALMETTO.** Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.  
**CONOVER'S COLOSSAL.** Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.  
**GIANT ARGENTEUIL.** Oz., 15c; ¼ lb., 35c; 1 lb., \$1.00, postpaid.  
**WASHINGTON.** (See Specialties.) Pedigreed Seed. Oz., 40c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

## Asparagus Roots

**PALMETTO.** One-year-old, \$1.50 per 100; \$12.00 per 1000, not postpaid.  
**WASHINGTON.** One-year-old, \$2.25 per 100; \$15.00 per 1000, not postpaid.  
**READING GIANT.** \$1.60 per 100; \$15.00 per 1000, not postpaid.  
**CONOVER'S COLOSSAL.** \$1.50 per 100; \$12.00 per 1000, not postpaid.

## Beans

**CULTURAL DIRECTIONS.** One quart to 100 feet of drill; about three-fourths bushel per acre of Bush Beans. Beans thrive on a rich, warm, light soil. It is not safe to plant until about the middle of May as the seed will rot in cold, wet ground, and the plants will not stand frost. Plant dwarf beans in rows two feet apart and from four to six inches apart. Lima Beans should not be planted until June first, when the soil is thoroughly warmed through. Limas will rot in cold ground.

**REFUGEE or 1000 TO 1.** Qt., 40c; pk., \$2.50; bu., \$9.00, not postpaid.  
**KENTUCKY WONDER.** Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.  
**DUTCH CASE KNIFE.** Qt., 45c; pk., \$3.00; bu., \$12.00, not postpaid.

**SIEBERT'S EARLY LIMA.** Qt., 50c; pk., \$3.50; bu., \$13.00, not postpaid.  
**KING OF THE GARDEN LIMA.** Qt., 70c; pk., \$5.00; bu., \$18.00, not postpaid.  
**BURPEE'S IMPROVED BUSH LIMA.** Qt., 70c; pk., \$5.00; bu., \$18.00, not postpaid.

**HENDERSON'S BUSH LIMA.** Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.  
**BURPEE'S STRINGLESS GREEN POD.** A very desirable dwarf, green podded sort for either home garden or market. Pods five to six inches long, thick, fleshy and perfectly stringless. Very tender and delicious. Qt., 50c; pk., \$3.50; bu., \$13.00, not postpaid.

**PROLIFIC BLACK WAX** (or German Black Wax). The earliest Wax Bean. Pods short, curved, slightly flattish. Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.

**IMPROVED GOLDEN WAX.** One of the earliest dwarf wax sorts. Pods flat, long, beautiful golden yellow, tender and stringless. Qt., 30c; pk., \$2.25; bu., \$9.00, not postpaid.

**DAVIS KIDNEY WAX.** Seed white, pods very long, straight, flat, white, wax-like, and very attractive. If picked when young, the pods are tender and stringless but if left too long become rather hard. Extremely productive. Qt., 45c; pk., \$3.00; bu., \$12.00, not postpaid.

**PENCIL POD BLACK WAX.** Pods round, very long, tender, and entirely stringless. Extremely productive. Best market gardeners' sort. Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.

**BURPEE'S NEW KIDNEY WAX.** A more vigorous and prolific grower than Wardwell's. Pods flat, brittle, fleshy, of a rich lemon color, stringless and well flavored. Qt., 50c; pk., \$3.25; bu., \$12.00, not postpaid.

**UNRIVALED WAX.** (See Specialties.) Qt., 50c; pk., \$3.25; bu., \$12.00, not postpaid.

**WARDWELL'S KIDNEY WAX.** Pods about six inches long, flat, slightly curved. Clear yellow, almost stringless. Qt., 30c; pk., \$2.75; bu., \$10.00, not postpaid.



Palmetto Asparagus



J.B.R.S.Co.

Davis Kidney Wax Beans

## Beets

**CULTURAL DIRECTIONS.** One ounce to fifty feet of drill. Five or six pounds per acre. Do not use stable manure if you want smooth beets with but few roots. Beets thrive on deep, rich, sandy land. For early crop sow in drills one foot apart, cover seed one inch. Sow as early as the ground can be worked in the spring. When plants are large enough to use as greens, thin to three inches apart in the row. Beets can be sown as late as July for main crop.

**CROSBY'S EGYPTIAN.** Oz., 10c;  $\frac{1}{4}$  lb., 25c; 1 lb., 80c, postpaid.

**DETROIT DARK RED.** Oz., 10c;  $\frac{1}{4}$  lb., 20c; 1 lb., 75c, postpaid.

**ECLIPSE.** Oz., 10c;  $\frac{1}{4}$  lb., 25c; 1 lb., 80c, postpaid.

**EARLY BLOOD TURNIP.** Oz., 10c;  $\frac{1}{4}$  lb., 20c; 1 lb., 60c, postpaid.

## Mangel or Stock Beets

**CULTURAL DIRECTIONS.** One ounce to fifty feet of drill, six pounds per acre. Sow early in the spring, in rows about two feet apart; cover seed one and one-half inches deep, pressing the ground firmly over the seed. When plants are three inches high thin to about eight inches apart in the row. The plants pulled may be used for greens.

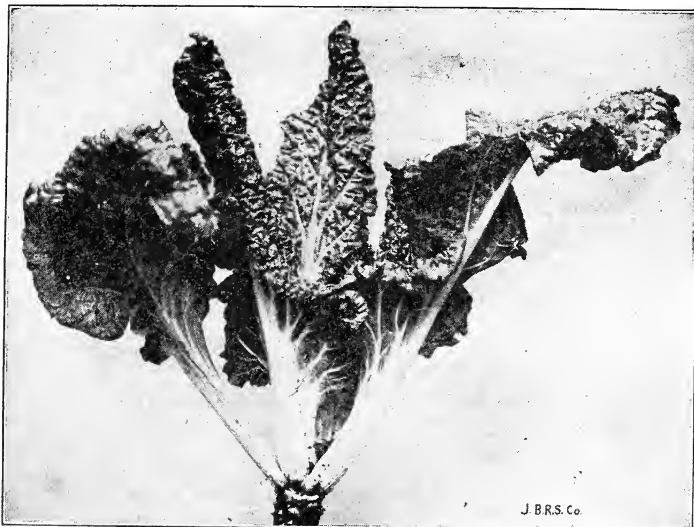
**MAMMOTH LONG RED.** Oz., 10c;  $\frac{1}{4}$  lb., 15c; 1 lb., 50c, postpaid.

**GOLDEN TANKARD.** Oz., 10c;  $\frac{1}{4}$  lb., 15c; 1 lb., 50c, postpaid.

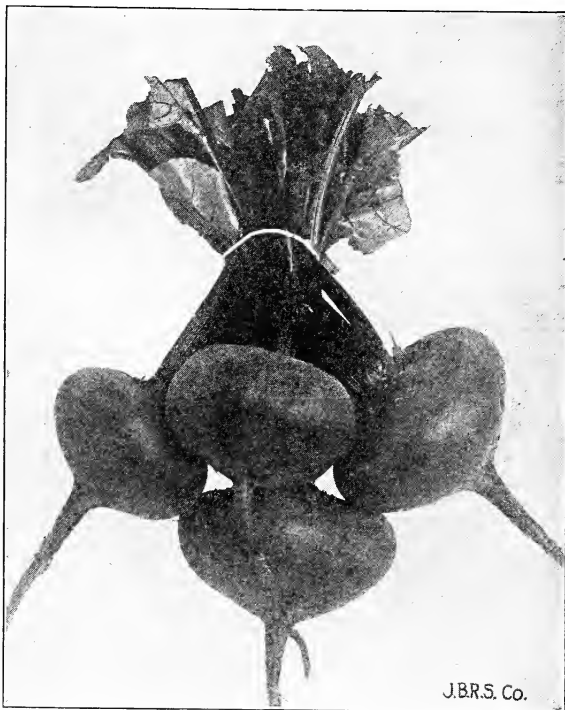
## Swiss Chard

**CULTURAL DIRECTIONS.** One ounce to fifty feet of drill; five pounds per acre. Sow early in the spring, in rows eighteen inches apart and thin to one foot apart. The plants are of very rank growth, and will continue to grow and produce all summer and if given a little protection during the winter, will live and produce early greens in the spring.

**LUCULLUS.** Leaves large and curly. Plant grows about two feet high, midribs are very broad and are a good substitute for Asparagus during the summer months. Oz., 10c;  $\frac{1}{4}$  lb., 20c; 1 lb., 75c, postpaid.



Swiss Chard, Lucullus



J.B.R.S. Co.

Crosby's Egyptian Beets

## Sugar Beets

Sugar Beets and Mangels are of great value for stock feeding, because of the improved health and condition of the animals, increased flow and quality of milk, and because of the saving in fodder. The yield is enormous, and the cost of growing is trifling. Grow a patch of them for winter feed. They are also excellent for poultry.

**GIANT FEEDING SUGAR.** Oz., 10c;  $\frac{1}{4}$  lb., 20c; 1 lb., 60c, postpaid.

**LANE'S IMPERIAL SUGAR.** Oz., 10c;  $\frac{1}{4}$  lb., 15c; 1 lb., 50c, postpaid.

## Brussels Sprouts

**CULTURAL DIRECTIONS.** Same as for cabbage.

**HALF DWARF.** Oz., 20c;  $\frac{1}{4}$  lb., 60c; 1 lb., \$2.00, postpaid.

## Cress or Pepper Grass

**CULTURAL DIRECTIONS.** Sow early in the spring in rich, well prepared soil, in rows about fifteen inches apart. Thin to four inches apart in the row.

**EXTRA CURLED.** Oz., 10c;  $\frac{1}{4}$  lb., 20c; 1 lb., 60c, postpaid.

## Corn Salad

**CULTURAL DIRECTIONS.** One ounce for 100 feet of drill. Sow in August or September for fall or spring use. Drill about one inch deep in rows twelve inches apart. Thin and keep free from weeds. Protect in winter by light covering of straw. Use as a salad.

**LARGE SEEDED.** Oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., \$1.00, postpaid.

# Cabbage

**CULTURAL DIRECTIONS.** One ounce will produce about 2000 plants; 10,890 plants will plant an acre of early cabbage; and 7,260 plants for an acre of late. Eight ounces of seed will plant an acre of early and four ounces an acre of late cabbage. For early cabbage, sow seed in hotbeds in January or February. Transplant as early as possible to the open ground about two feet apart each way. For late cabbage, sow seed in the open ground in May and transplant about July first in rows 2½ feet each way.

**GOLDEN ACRE.** (See Specialties.) Price, Oz., \$1.60; ¼ lb., \$5.00; 1 lb., \$18.00, postpaid.

**EARLY JERSEY WAKEFIELD.** (See Specialties.) Oz., 25c; ¼ lb., 80c; 1 lb., \$2.75, postpaid.

**EARLY WINNIGSTADT.** Medium early, short stemmed, heads solid, fine grained, cone shaped and pointed. Oz., 40c; ¼ lb., \$1.10; 1 lb., \$4.00, postpaid.

**CHARLESTON or LARGE WAKEFIELD.** About a week later than the Early Jersey Wakefield. Heads are larger, fully as solid, and less pointed. Oz., 20c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

**COPENHAGEN MARKET.** Nearly as early as the Jersey Wakefield. Stems short, heads large, round and solid, with few outer leaves. Oz., 40c; ¼ lb., \$1.10; 1 lb., \$4.00, postpaid.

**ALL SEASONS.** Heads large, round and very deep; can be planted for early or late crop. Good keeper. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**HENDERSON'S EARLY SUMMER.** Second early, round-headed sort. Follows Early Jersey Wakefield. Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.00, postpaid.

**PREMIUM FLAT DUTCH.** Heads large, round, flattened and quite firm. Has medium stem and is very hardy. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**SUREHEAD.** All sure to head. Late Cabbage of the Flat Dutch type; a splendid keeper. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.25, postpaid.

**DANISH BALLHEAD.** Short stemmed, heads round, very solid and heavy. Splendid keeper, hardy, and the best winter sort. Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.



J.B.R.S.Co

## Danish Ballhead Cabbage

**GLORY OF ENKHUIZEN.** About as early as Charleston Wakefield. The heads are large, round and very solid. It has few outside leaves and will stand close planting. Splendid for late crop. When planted as late as July 15th, will mature for the market in October. Will not keep as well as Danish Ballhead, when stored over winter. Price, oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**DRUMHEAD SAVOY.** Very large, solid heads. Dark Green, superior quality. Price, oz., 40c; ¼ lb., \$1.10; 1 lb., \$4.00, postpaid.

**AMERICAN SAVOY.** Large, flattish heads, very curly and hard. One of the best Savoys. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.50, postpaid.

**RED STONEHEAD.** Almost identical in shape, size and hardness with the Danish Ballhead. The head is solid, heavy, and the dark red, rich color reaches farther toward the center than any other of the red sorts. Oz., 25c; ¼ lb., \$1.10; 1 lb., \$4.00, postpaid.

**MAMMOTH ROCK RED.** Heads solid, of good size and quality. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.50, postpaid.



Premium Flat Dutch Cabbage

# Chinese Cabbage

**CULTURAL DIRECTIONS.** One ounce will produce 2,000 plants. Do not sow seed till the last of May, as earlier sowing generally results in most of the plants going to seed instead of making heads. Seed may be sown in seed beds and transplanted in rows three feet apart and about fifteen inches apart in the row, or may be sown in rows and thinned. For late crop may be sown as late as August tenth. Late crop is generally trenched with boards. Make trench about six feet wide, pull the head, cutting off roots and place side by side and trench. Bank outside the boards with dirt and protect the tops with straw, putting boards over top. Remove as wanted during early winter months.

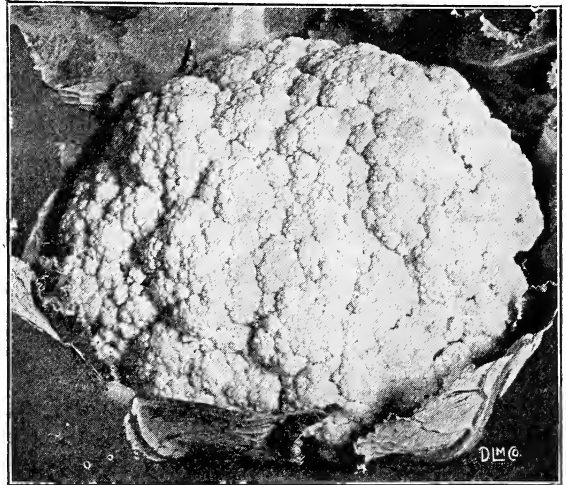
**Chibili (Special).** This variety has always given the best satisfaction, both on account of purity and for the reason that it can be depended upon to head instead of running up to seed. It has been planted in May, without showing seeders, but we do not advise sowing seed until June. Heads about 16 inches, coming to a sharp point at the peak. Very solid and heavy. Midribs broad and thick, blanches to a beautiful white, very handsome when trimmed for the market. Mild, semi-cabbage flavor; outside leaves dark bluish green. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

# Cauliflower

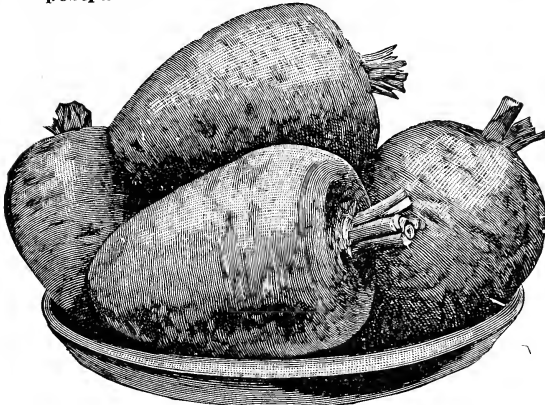
**CULTURAL DIRECTIONS.** One ounce of seed will produce 2,000 plants. Four ounces of seed will plant an acre. Directions about the same as Cabbage, except planting in rows about three feet apart and eighteen inches apart in the row. When plants begin to head, the leaves should be tied up around the heads to protect them from the sun.

**SELECT SNOWBALL.** A very fine strain of this variety, grown from selected heads. Oz., \$2.25; ¼ lb., \$8.00; 1 lb., \$30.00, postpaid.

**DANISH PERFECTION.** The self-protecting cauliflower, so called on account of the spiral-shaped manner in which the leaves grow around the stem, thereby protecting the head with little, if any, tying. This is a cross between Earliest Export and Danish Dry Weather. Heads snow-white, very compact, and solid. Highly recommended. Oz., \$2.25; ¼ lb., \$8.00; 1 lb., \$30.00, postpaid.



Select Snowball Cauliflower



French Short Horn Carrots

# Carrots

**CULTURAL DIRECTIONS.** One ounce to 100 feet of drill; two pounds per acre. For early crop, sow in April or May, and June to July for late. Sow seed half an inch deep in rows 12 inches apart and thin to three inches apart in the row. Plant in rich, sandy loam.

**FRENCH SHORT HORN.** Very early bunching Carrot; best for forcing. Roots orange red in color, about three inches long, tender and sweet. Oz., 10c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

**CHANTENAY.** A medium early, half-long variety for the early market. Roots five or six inches long, smooth and tapering; orange red in color. Used largely for bunching. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**DANVERS HALF LONG.** The best main crop sort; Roots smooth and handsome. Very productive. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**LONG ORANGE.** Good variety for deep, sandy soil. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

**GUERANDE or OXHEART.** Very short, thick and stubby. Very desirable for heavy clay soil, as it is easily harvested. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**WHITE BELGIAN.** Large white stock carrot. Oz., 10c; ¼ lb., 20c; 1 lb., 60c, postpaid.

**YELLOW BELGIAN.** Grows one-third out of the ground. Very large, long yellow stock carrot. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**NANTES.** A very superior Carrot. It is coreless, brittle, fine-grained and of fine mild sweet flavor. The color is reddish-orange and the skin is smooth. It is 6 inches long, cylindrical and very stump-rooted. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**SCARLET HORN.** A small, early, stump-rooted variety of good flavor and quite coreless. The roots will average about 3 inches long. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**FEONIA.** A cross between Nantes and Chantenay, combining the tenderness of the former with the keeping qualities of the latter. The long obtuse, cylindrical roots are a beautiful scarlet and practically coreless. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00.

# Cucumbers

**CULTURAL DIRECTIONS.** One quart of seed to fifty hills. One to two pounds per acre. Do not plant near wild cucumbers, or milkweeds, as these plants carry the spores of cucumber wilt. Cucumbers should not be planted until the ground is warm, about June first. For pickles, they may be planted as late as July first. They require a warm, rich, sandy soil. Plant in hills about four feet apart. Prepare the hills by mixing about half a small shovelful of **Pulverized Hen Manure** well with the soil. Plant about eight seeds to the hill. Sprinkle the vines with **Slug Shot** to drive away the striped bugs. When all danger from insects is past, thin to three or four of the strongest plants. Spray regularly with a 20-30% Copper Lime Dust, to prevent blight and wilt. To prevent disease, do not allow wild cucumbers, milkweeds or poke-weed to grow near either cucumbers or tomatoes.

**EARLY FORTUNE.** A selection from the Davis Perfect. Early plant, vigorous, with heavy, thick foliage and one of the most productive sorts now grown. Fruit symmetrical, about nine inches in length, round and beautiful dark green in color, which does not fade. Flesh very brittle and crisp, with small seed cavity, and seeds are not tough, until they begin to ripen. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

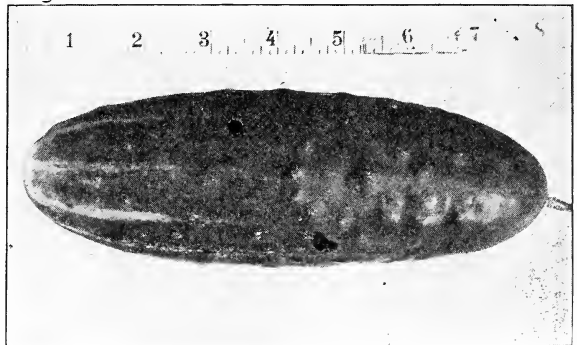
**DAVIS' PERFECT.** One of the products of our Eugene Davis. A hybrid produced by crossing the White Spine variety with a long English forcing cucumber. The Davis Perfect is one of the most prolific sorts, taking on the bearing qualities from the White Spine, and color and length from the English parent. The fruit is long, slim, and holds color till nearly ripe. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**EARLY CLUSTER.** Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

**IMPROVED LONG GREEN.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**EARLY WHITE SPINE.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.25, postpaid.

**WESTERFIELD'S or CHICAGO PICKLING.** The vines commence bearing when very young, and continue longer than any other pickling variety. Fruit of medium size, pointed at both ends, and make a firm pickle. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.



Early Fortune Cucumber



J. B. R. S. Co.

Easy Bleaching Celery

## Celery

**CULTURAL DIRECTIONS.** One ounce will produce from 5,000 to 10,000 plants. Two ounces per acre. Muck soil is best for Celery, but good Celery may be grown on rich, loamy soil if water can be applied freely. Celery needs manure and fertilizer. **Pulverized Hen Manure** gives excellent results, and a 2-8-15% Commercial fertilizer pays. For early crop sow seed in hotbeds or greenhouse in March. Make seed bed very fine, sow seed broadcast and pack soil. Transplant in June in rows three or four feet apart. Early Celery is bleached with boards or paper. For late crop sow seed in April or May in open seed beds and transplant in July. Bank with muck or dirt and trench in the field in October.

**GOLDEN PLUME.** (See Specialties.) Oz., \$3.25; ¼ lb., \$13.50; ½ lb., \$30.00; 1 lb., \$50.00, postpaid.  
**NEW GOLDEN SELF-BLANCHING.** (See Specialties.) Oz., \$1.25; ¼ lb., \$4.50; ½ lb., \$8.00; 1 lb., \$16.00, postpaid.

**EASY BLEACHING.** (See Specialties.) Oz., \$1.00; ¼ lb., \$3.50; ½ lb., \$8.00; 1 lb., \$14.00, postpaid.

**FORDHOOK EMPEROR.** Oz., 40c; ¼ lb., \$1.25; ½ lb., \$4.00; 1 lb., \$8.00, postpaid.

**GOLDEN SELF-BLANCHING.** Old Style, American grown seed. Oz., 75c; ¼ lb., \$2.50; 1 lb., \$8.00, postpaid.

**EBERLE'S WONDERFUL CELERY.** A distinct and valuable early variety. The plants are semi-dwarf, very vigorous, and are not so susceptible to blight and other Celery diseases. It has a very full heart which bleaches quickly to a beautiful golden yellow color. Its quality is surpassed by none, and its handsome appearance commands a ready sale in any market. An excellent sort for both home or market garden. It is all the name implies, Wonderful. Oz., \$2.00; ¼ lb., \$8.50; ½ lb., \$15.00; 1 lb., \$30.00, postpaid.

**COLUMBIA.** Very brittle and crisp, sweet and nutty. So tender it is hard to pack for shipping. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

**PRIDE OF THE MARKET.** (See Specialties.) (Ely's.) Oz., \$1.75; ¼ lb., \$6.00; 1 lb., \$20.00, postpaid.

**SOUP or CUTTING.** The leaves are used for flavoring soups, etc. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**CELERIAC or TURNIP-ROOTED CELERY.** Oz., 30c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

## Sweet Corn

**CULTURAL DIRECTIONS.** One pint for 100 hills; about six quarts per acre. Early corn is planted in rows 2½ to 3 feet apart, and about 8 inches apart in the row, in May, and will be ready for the table eight or nine weeks from date of planting. Later varieties should be planted from the 15th of May to the 15th of June. Plant in hills three to four feet apart, and it will be ready for use in from ten to twelve weeks from date of planting.

**PINK COB CORY.** (See Specialties.) Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

**EARLY WHITE COB CORY.** The earliest white cob sweet corn. Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.

**WHIPPLE'S EARLY.** (See Specialties.) Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

**BLACK MEXICAN.** Very early. There is no sweeter corn; stays tender longer than Golden Bantam. Corn has light amber tinge when ready to use. Kernels turn bluish black when ripe. Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.

**COUNTRY GENTLEMAN.** Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

**EARLY EVERGREEN.** Ears large; earlier than Stowell's Evergreen. Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

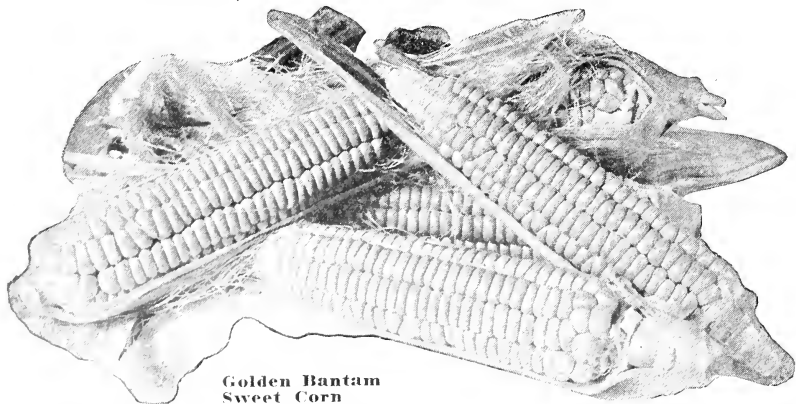
**BANTAM EVERGREEN.** (See Specialties.) Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

**STOWELL'S EVERGREEN.** Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.

**EARLY MINNESOTA.** Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.

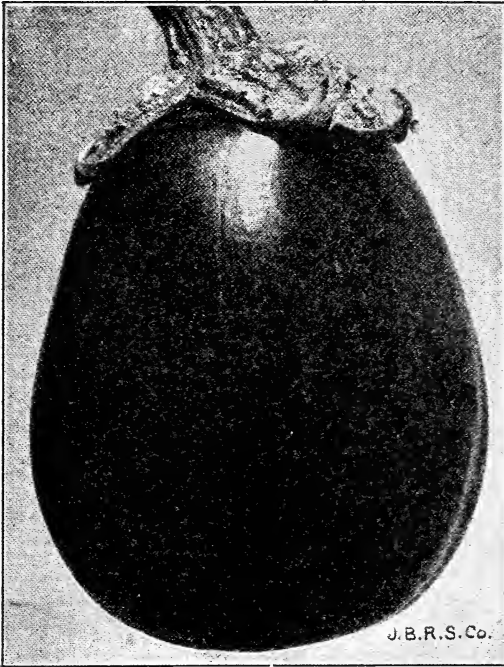
**GOLDEN BANTAM.** Qt., 50c; pk., \$3.50; bu., \$12.00, not postpaid.

**EARLY CROSBY.** Popular second early Sweet Corn. Ears larger than the extra early varieties, and better quality. Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.



Golden Bantam Sweet Corn





Black Beauty Egg Plant

## Egg Plant

**CULTURAL DIRECTIONS.** One ounce to 1000 plants. Seed germinates very slowly and requires warm ground. Start in hotbeds in March. Transplant about June 1st in rows about three feet apart and two feet apart in the row.

**BLACK BEAUTY.** Early and productive. Fruit large and of a rich glossy black color. **Postpaid, oz., 40c; ¼ lb., \$1.40; 1 lb., \$5.00.**

**NEW YORK PURPLE.** **Postpaid, oz., 40c; ¼ lb., \$1.40; 1 lb., \$5.00.**

## Endive

**CULTURAL DIRECTIONS.** One ounce to 150 feet of drill. Sow in rows about fifteen inches apart and thin to one foot apart in the row. Sow seed for fall crop in June or July. When nearly full grown tie outer leaves together bringing them up over the head for blanching.

**BROAD LEAVED BATAVIAN.** **Postpaid, oz., 10c; ¼ lb., 30c; 1 lb., \$1.00.**

**MOSS CURLED.** **Postpaid, oz., 10c; ¼ lb., 30c; 1 lb., \$1.00.**

**LARGE GREEN CURLED.** **Postpaid, oz., 10c; ¼ lb., 30c; 1 lb., \$1.00.**

## Kale or Borecole

**CULTURAL DIRECTIONS.** One ounce to 150 feet of drill. Sow from August 15th to October in rows, eighteen inches apart, and they will yield greens during fall and winter. They are improved by freezing.

**DWARF GREEN CURLED.** **Postpaid, oz., 15c; ¼ lb., 40c; 1 lb., \$1.50.**

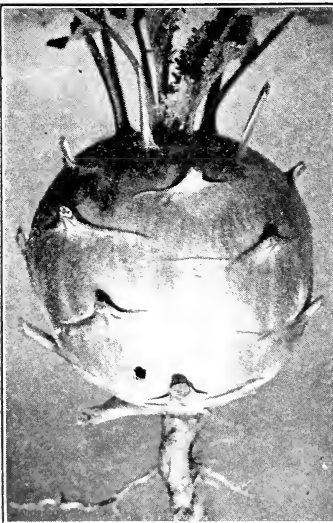
**TALL GREEN CURLED.** **Postpaid, oz., 15c; ¼ lb., 40c; 1 lb., \$1.50.**

## Leek

**CULTURAL DIRECTIONS.** One ounce to 100 feet of drill. Two or three pounds per acre. Sow in May in rows fifteen to eighteen inches apart and thin to six or eight inches apart, generally sown in trenches and covered with half an inch of soil, or they may be sown in seed beds and transplanted. When grown for the market they are left in the field all winter and pulled early in the spring.

**AMERICAN FLAG.** Stem about ten inches long by two inches thick. A strong vigorous plant with mild flavor. One of the best sorts for the market garden. **Postpaid, oz., 20c; ¼ lb., 60c; 1 lb., \$2.00.**

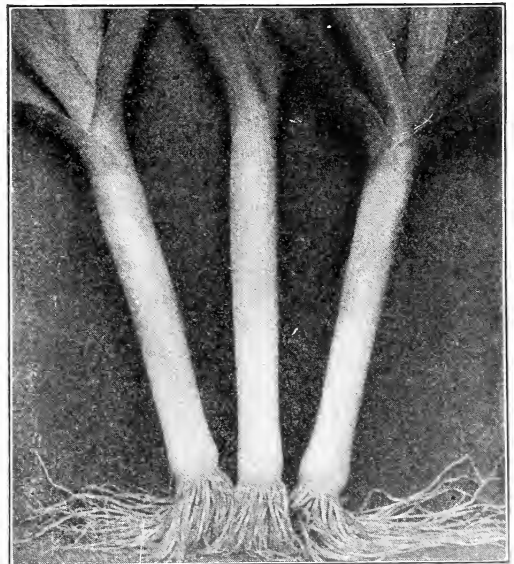
## Kohl Rabi



White Vienna Kohl Rabi

**CULTURAL DIRECTIONS.** One ounce to 200 feet of drill. Seed should be sown in light, rich soil, very early in the spring for early crop, in rows eighteen inches apart and thin to six inches apart in the row. Plantings should be made the latter part of July for fall use. Should be used when young and tender.

**EARLY WHITE VIENNA.** Very early, small tops, can be planted close together; best for forcing, or field culture. **Postpaid, oz., 20c; ¼ lb., 60c; 1 lb., \$2.00.**



American Flag Leek

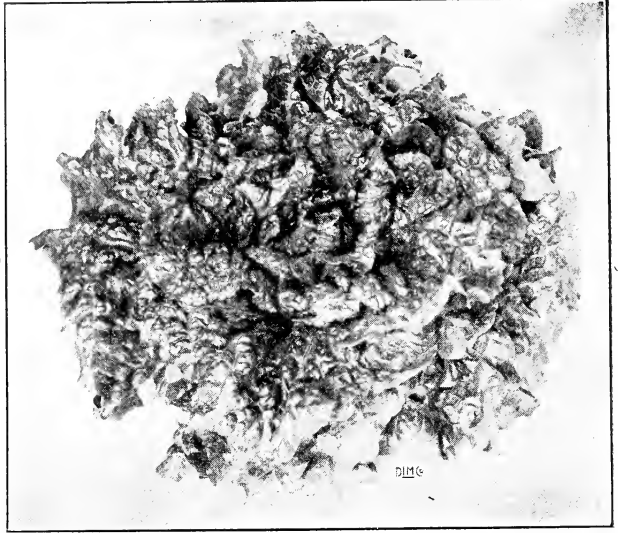
# Lettuce

**CULTURAL DIRECTIONS.** One ounce to 150 feet of drill. Lettuce requires rich soil to grow best quality. Mix **Pulverized Hen Manure** well with the soil and sow seed very early in the spring. For leaf lettuce, sow in rows twelve inches apart and do not thin until plants are big enough to use. Head lettuce should be sown in rows twelve inches apart and thinned to eight inches apart in the row.

**EARLY CURLED SIMPSON.** An early loose leaf variety. One of the best sorts for the home garden. Postpaid, oz., 20c; ¼ lb., 75c; 1 lb., \$2.00.

**BLACK-SEEDED SIMPSON.** One of the best loose leaf varieties for the home garden or for the market garden, for out-door sowing. Can be grown all through the season. Very tender. Postpaid, oz., 25c; ¼ lb., 80c; 1 lb., \$3.00.

**GRAND RAPIDS FORCING.** An exceptionally good strain of the old type of this forcing variety. Postpaid, oz., 25c; ¼ lb., 80c; 1 lb., \$3.00.



**Black-Seeded Simpson Lettuce**

**GRAND RAPIDS FORCING (Special).** The Growers' or Washington Strain. (See Specialties.) Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

**HANSON.** Forms large, flat head, very slow to run to seed, outer leaves are bright green, inner leaves white, quality good. Postpaid, oz., 20c; ¼ lb., 60c; 1 lb., \$2.00.

**SALAMANDER.** A large, firm head, leaves light green, broad, thick, somewhat crumpled, closely overlapping so that they blanch to a creamy white. Withstands heat well, and should be planted so as to head in hot weather. Postpaid, oz., 15c; ¼ lb., 35c; 1 lb., \$1.25.

**CALIFORNIA CREAM BUTTER or ROYAL SUMMER CABBAGE.** A popular variety for autumn and winter use. Forms a large head, which is very buttery, and of a rich, golden yellow inside. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

## Head Lettuce

**BIG BOSTON.** (See Specialties.) Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**ICEBERG.** A large, crisp Lettuce, very tender, stands hot weather better than most varieties, but has not been grown successfully on our muck. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

**MAY KING.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**PRIZEHEAD.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**ALL SEASONS.** (See Specialties.) Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**NEW YORK or WONDERFUL.** Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**UNRIVALED.** (See Specialties.) Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

## Muskmelon

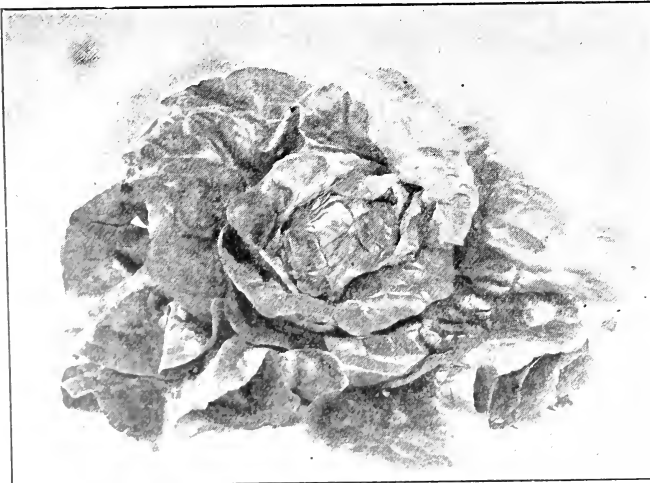
**CULTURAL DIRECTIONS.** One ounce will plant 50 hills, one pound an acre. Melons do best in rich, sandy soil. Mix **Pulverized Hen Manure** well with the soil for each hill. Hills should be from four to six feet apart. Plant ten to twelve seeds to the hill. Cover seeds with an inch of soil. When plants are up, dust well with Slug Shot, to protect from the striped beetles. When danger from frost and insects is past, thin to four good plants to the hill.

**LAKE CHAMPLAIN.** (See Specialties.) Oz., 20c; ¼ lb., 75c; 1 lb., \$3.00, postpaid.

**HOODOO.** Vine vigorous, quite blight-resistant and very prolific. Flesh orange in color. Fruit medium size; quality sweet and delicious. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.



**Big Boston Head Lettuce**



**Head Lettuce, May King**

**ROCKY FORD.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**HEARTS OF GOLD.** (See Specialties.) Oz., 60c; ¼ lb., \$1.75; 1 lb., \$5.25, postpaid.

**HEARTS OF GOLD.** (See Specialties.) Grown from Morrill's Pedigreed Seed.

Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**EDWARDS' PERFECTO.** (See Specialties.) Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

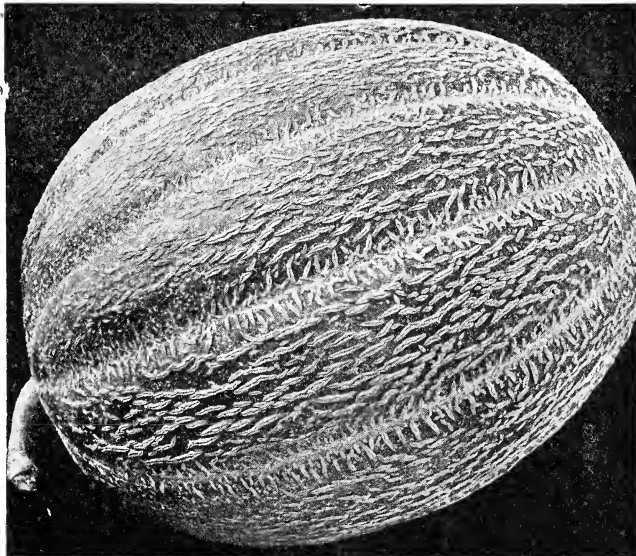
**THE BENDER.** (See Specialties.) Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**EXTRA EARLY OSAGE.** (See Specialties.) Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**OSAGE.** Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

**EXTRA EARLY KNIGHT.** The earliest high quality melon and especially adapted for growing in the far North. A medium sized variety of the Acme type, with oblong fruit distinctly ribbed and well covered with a close gray netting; skin deep green, turning to golden at maturity; flesh fairly thick, exceedingly sweet and of a bright green color. Worthy of a place in every garden. Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**EMERALD GEM.** Unquestionably one of the best and earliest melons for home garden and local markets and in our opinion the best for quality; of medium size, a flattened globe in form, irregularly and distinctly ribbed and lightly netted; color deep emerald green; flesh very thick, sweet and of rich salmon color; seed cavity exceedingly small. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.



Extra Early Osage Muskmelon

## Watermelon

**CULTURAL DIRECTIONS.** One ounce to 30 hills, about three pounds per acre. Watermelons want rich, sandy soil. Cultural directions the same as for Muskmelons, except the hills should be eight feet apart.

**COLE'S EARLY.** One of the earliest melons; small, seldom more than twelve inches long. Flesh red and sweet; rind thin and brittle. Not a good shipper, but good for home garden and early market. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**HALBERT HONEY.** Very similar to Kleckley's Sweet, but is blunt at both ends. For home market and garden it has no rival, but it is not a good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**KLECKLEY'S SWEET or MONTE CRISTO.** One of the sweetest melons on the market. Melons long, averaging eighteen to twenty inches. Rind very thin, dark green in color. Not a good shipper, but all right for early market and home gardens. Fruit tapers slightly toward the stem end. Big crisp, solid, crimson heart. Medium early. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**IRISH GREY.** Wonderful in yield. Will produce more good melons than any other variety. The sparkling red flesh is very sweet and delicious and has no hard, unripe centers and is never stringy. The flesh is firm and will not break when sliced. The size is always large. Shape long. Earlier than Tom Watson. Will keep in good condition long after being picked. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

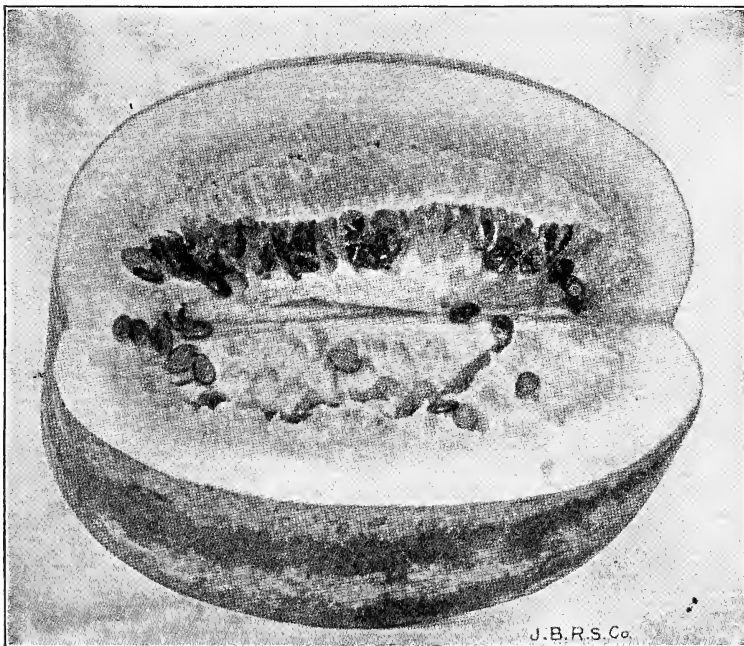
**TOM WATSON.** Produces melons 18 to 24 inches long by 10 to 12 inches in diameter, weighing 40 to 50 pounds, on rich soil. Flesh deep red and very crisp; melting and of exquisite flavor. Good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**TRIUMPH.** One of the largest melons. Dark green, red flesh; good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**PEERLESS.** An old standby, and one of the best general crop melons for the home market. Medium early, fruit oblong, large size; rind light green, mottled and veined; flesh scarlet, solid to center; sweet, melting and delicious. Not a good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**SWEETHEART.** Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**CITRON.** For preserving. Red seed. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.



Cole's Early Watermelon

J.B.R.S.Co.

## Onions

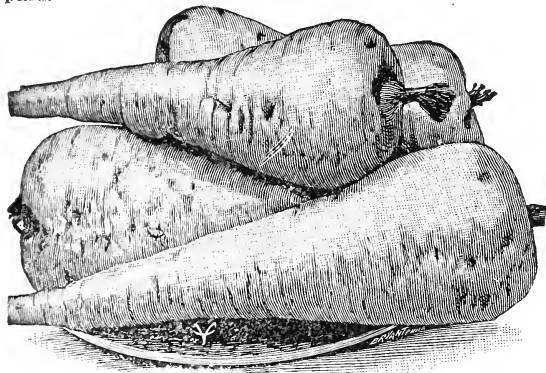
### CULTURAL DIRECTIONS.

One ounce to 100 feet of drill; about four pounds to the acre. Onions for the market are generally grown on muck land in Michigan, but may be grown for home use on any rich, loamy soil. They appreciate plenty of fertilizer on muck; the market growers apply heavily about a 10-10 fertilizer. Drill in rows about a foot apart. As soon as the weeds appear, weed carefully and give shallow cultivation. Sow as early as possible in spring.

**RED WETHERSFIELD.** Oz., 15c;  $\frac{1}{4}$  lb., 40c; 1 lb., \$1.50, postpaid.

**SOUTHPORT YELLOW GLOBE.** Bulbs nearly round, but slightly longer than Yellow Globe Danvers. Not quite so early, but much heavier yielder and not flat across the bottom. Color beautiful golden; the best main crop sort. Oz., 20c;  $\frac{1}{4}$  lb., 50c; 1 lb., \$1.70, postpaid.

**YELLOW GLOBE.** (See Specialties.) Connecticut grown. Oz., 20c;  $\frac{1}{4}$  lb., 60c; 1 lb., \$1.80, postpaid.



Hollow Crown Parsnips

## Parsnips

**CULTURAL DIRECTIONS.** One ounce will sow 100 feet of drill; three to four pounds per acre. Sow in April or May. Parsnips require a long season to mature. Sow thickly and thin as for Carrots, as seed does not germinate well unless conditions are just right.

**HOLLOW CROWN.** Oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., \$1.00, postpaid.

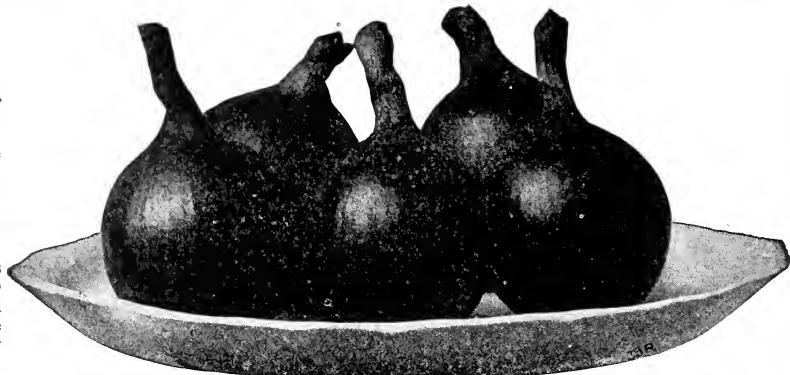
**LONG SMOOTH DUTCH or SUGAR.** Roots very long, slim and much sweeter than the Hollow Crown. Oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., \$1.00, postpaid.

## Parsley

**CULTURAL DIRECTIONS.** One ounce to 150 feet of drill. Seed germinates very slowly. Sow thickly in rows about 15 inches apart, and thin to four or five inches apart in the row. Parsley will live through the winter without protection, and if plants are left, there will be plenty for early spring use, but will soon go to seed. Will last longer the second year if sown in the fall.

**CHAMPION MOSS CURLED.** Leaves have the appearance of finely curled moss; plant hardy and very slow to run to seed. Oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., \$1.00, postpaid.

**TRIPLE CURLED.** Plant just as handsome, beautifully curled and more rapid grower. Will produce a larger crop. Oz., 10c;  $\frac{1}{4}$  lb., 30c; 1 lb., \$1.00, postpaid.



Southport Red Globe Onions

**SOUTHPORT RED GLOBE.** Shape same as Southport Yellow, but color very dark red. Better keeper than the Yellow, but not so good a seller. Oz., 20c;  $\frac{1}{4}$  lb., 60c; 1 lb., \$1.80, postpaid.

**SOUTHPORT WHITE GLOBE.** Oz., 25c;  $\frac{1}{4}$  lb., 80c; 1 lb., \$3.00, postpaid.

**YELLOW GLOBE DANVERS.** Oz., 20c;  $\frac{1}{4}$  lb., 50c; 1 lb., \$1.70, postpaid.

**PRIZETAKER or MAMMOTH YELLOW SPANISH.** Very large, nearly round, light straw color, very mild and sweet. Late. Oz., 20c;  $\frac{1}{4}$  lb., 50c; 1 lb., \$1.70, postpaid.

**MICHIGAN YELLOW GLOBE.** Earlier than Southport, but more flat across the bottom. Oz., 20c;  $\frac{1}{4}$  lb., 50c; 1 lb., \$1.70, postpaid.

**WHITE PORTUGAL or SILVERSKIN.** An early flat, white onion of mild flavor. Used mostly to grow sets. Oz., 20c;  $\frac{1}{4}$  lb., 70c; 1 lb., \$2.50, postpaid.

**OHIO YELLOW GLOBE.** The best of the yellow Globe varieties. The skin is bright, glossy, orange-yellow, and the flesh is white, and fine grained. The bulbs are remarkably uniform in size and shape, and being firm and hard possess fine keeping and shipping qualities. Oz., 25c;  $\frac{1}{4}$  lb., 60c; 1 lb., \$1.80, postpaid.

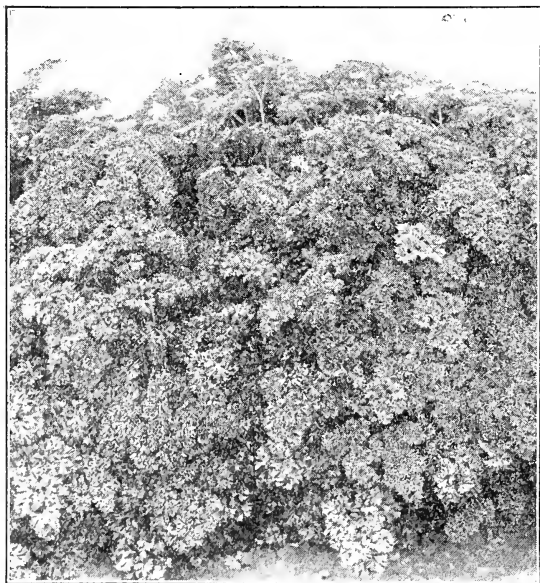
## Onion Sets

**YELLOW BOTTOM SETS.** Write for prices.

**WHITE SILVERSKIN SETS.** Write for prices.

**RED BOTTOM SETS.** Write for prices.

**EGYPTIAN or PERENNIAL TOP SETS.** Qt., 15c; bu., \$2.50, not postpaid.



Champion Moss Curled Parsley

## Peas

**CULTURAL DIRECTIONS.** One quart will plant 100 feet of drill; about one bushel per acre. Peas do best on rich, sandy loam that has been well manured the previous season. Plant smooth, early sorts as soon as the ground can be worked in the spring. The wrinkled varieties are liable to rot if the soil is cold and wet, and should be planted later.

**ALASKA.** A small, smooth blue pea, and one of the earliest. Grown largely by canners and market gardeners for early crop. Vines about two feet in height, pods small, but well filled. Can nearly all be harvested at one picking. **Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.**

**DARK PODDED SUTTON'S EXCELSIOR.** (See Specialties.) **Qt., 40c; pk., \$3.00; bu., \$11.00, not postpaid.**

**IMPROVED LAXTONIAN.** (See Specialties.) **Qt., 50c; pk., \$3.25; bu., \$12.00, not postpaid.**

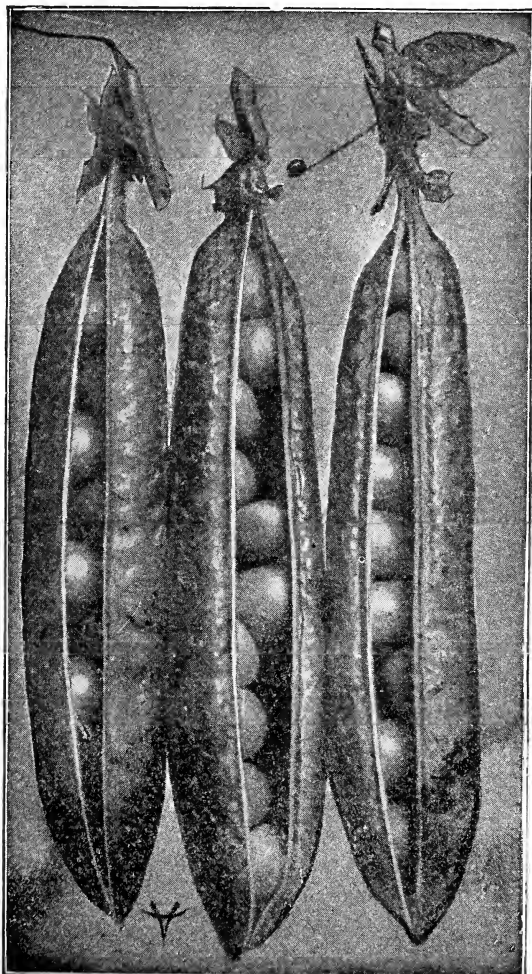
**DWARF TELEPHONE.** (See Specialties.) **Qt., 50c; pk., \$3.00; bu., \$11.00, not postpaid.**

**THOMAS LAXTON.** One of the best second early sorts for the market gardeners. Vines of same height as the Gradus, but a little earlier, more hardy and productive. Pods long, blunt ended and well filled with large peas. Peas wrinkled. **Qt., 60c; pk., \$3.25; bu., \$12.00, not postpaid.**

**AMERICAN WONDER.** One of the earliest and sweetest wrinkled peas. Vines very dwarf and productive. Pods small, but well filled. The most delicious pea for the home garden. **Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.**



Thomas Laxton Peas



Telephone Peas

**LITTLE GEM.** A second early, hardy variety. Prolific, bearing pods on both sides of the stalk, beginning near the ground. Pods medium length, round; and well filled to the end. Height of vine about fifteen inches. Seed green, wrinkled. **Qt., 40c; pk., \$2.50, bu., \$9.00, not postpaid.**

**LITTLE MARVEL.** One of the most prolific of the second early sorts. Pods long, three to four inches, well filled with deliciously sweet peas. Vines about 15 inches in height. **Qt., 40c; pk., \$2.75, bu., \$10.50, not postpaid.**

**ALDERMAN.** A little later than the Telephone. Vines about four feet in height; very heavy foliage. One of the most productive sorts. Pods long, dark green, well filled; seed wrinkled. **Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.**

**BLISS' EVERBEARING.** Height of vine about 30 inches. Pod broad and borne at top of vine. Peas large and of fine eating quality. **Qt., 40c; pk., \$2.40; bu., \$9.00, not postpaid.**

**CHAMPION OF ENGLAND.** Vines four to five feet in height, productive. Pods two to three inches long, broad and well filled. Peas medium size, of unsurpassed sweetness. **Qt., 40c; pk., \$2.40; bu., \$9.00, not postpaid.**

**DWARF GRAY SUGAR.** A dwarf edible pod variety. Vines about two feet high. Cook pods like string beans. **Qt., 40c; pk., \$2.75; bu., \$10.00, not postpaid.**

**MELTING SUGAR, or EDIBLE POD.** A tall variety, bearing large, flat, brittle pods. These are sweet and are cut or broken and cooked like string beans. Is a delicious vegetable and should be better known and more generally used. **Qt., 50c; pk., \$3.25; bu., \$12.00, not postpaid.**

**WORLD'S RECORD.** A new variety on the order of Gradus, which it resembles in many ways; might well be considered an improvement on that sort, being slightly earlier, more productive and true to a fixed type. Grows about 2 feet in height, with large, dark green pods nearly 4 inches in length, broad, pointed and always well filled with large, sweet peas of splendid quality. An excellent, profitable sort for home or market garden. **Qt., 60c; pk., \$3.25; bu., \$12.00, not postpaid.**

## Peppers

**CULTURAL DIRECTIONS.** One ounce will produce about 2,000 plants; about 7,000 plants for an acre. Sow seed in hotbeds from February to April; transplant to open ground when all danger from frost is past, in rows about three feet apart and eighteen inches apart in the row. Seed can be sown in the open ground late in May, and thinned as above. Cover seed about half an inch.

**CHINESE GIANT.** Mammoth fruits, twelve to fifteen inches in circumference. Flesh thick, tender, mild and sweet. Oz., 50c; ¼ lb., \$1.75; 1 lb., \$6.00, postpaid.

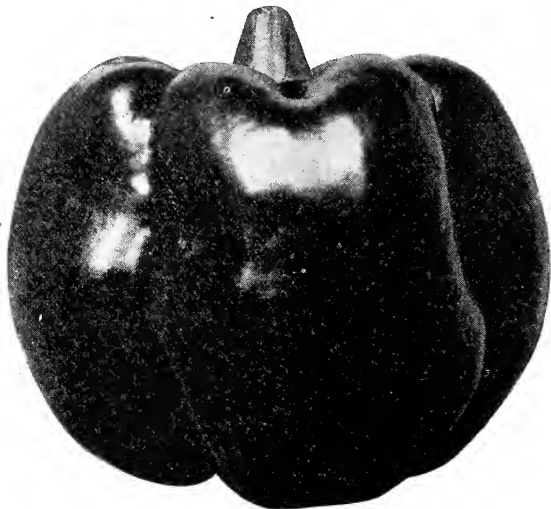
**BULL NOSE or LARGE BELL.** Large bell-shaped, thick-fleshed fruit. Good for Mango Pickles. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$4.50, postpaid.

**RUBY KING.** Large, four to six inches long; mild and sweet. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

**HARRIS' EARLIEST.** (See Specialties.) Oz., 60c; ¼ lb., \$2.00; 1 lb., \$7.00, postpaid.

**WORLD BEATER.** (See Specialties.) Oz., 50c; ¼ lb., \$1.75; 1 lb., \$6.00, postpaid.

**LONG RED CAYENNE.** Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.



Chinese Giant Pepper

## Pumpkins

**CULTURAL DIRECTIONS.** One ounce of seed for 20 hills. About 3 pounds per acre. Usually grown in corn fields, but can be grown as a separate crop. Seed should be planted in hills eight to ten feet apart each way, after soil gets warm. Cultivate often until vines begin to run. Cut pumpkins after leaves die, leaving three to four inches of stem attached to fruit. Store in a dry place, and do not bruise.

**SUGAR PIE.** Fruit small, round, flattened at the ends, and slightly ribbed. Skin and flesh deep orange-yellow. Flesh very thick and of high quality. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

**LARGE CHEESE or KENTUCKY FIELD.** Large, round, flattened fruits, ribbed and creamy. Buff in color. Flesh yellow, deep and of fine quality. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**CONNECTICUT FIELD.** Generally used for planting in corn for stock feeding; also makes good pies. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**KING OF THE MAMMOTHS.** The giant among pumpkins. Often grows two feet or more in diameter. Oz., 10c; ¼ lb., 20c; 1 lb., \$1.00, postpaid.



Sweet or Sugar Pie Pumpkin

**JAPANESE PIE.** A large crook-necked sort. Skin green, striped yellow. Flesh yellow and of fine quality. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

**QUAKER PIE.** Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

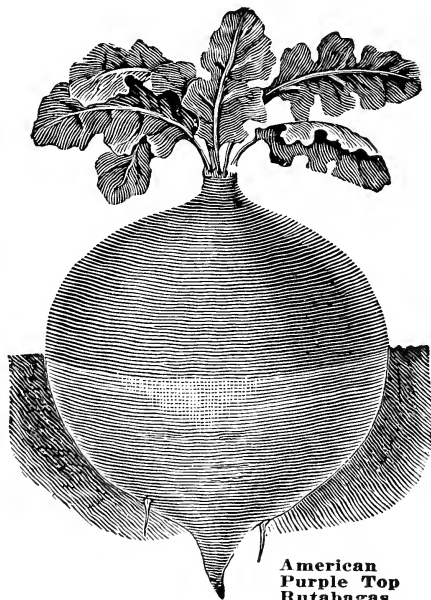
**GOLDEN OBLONG.** One of the best pie and canning Pumpkins. Oblong in shape, averaging about twenty by ten inches. Skin golden yellow and very tough, making an excellent keeper. Flesh very thick, yellow and of fine quality and never stringy. Heavy yielder and fruit solid and heavy. Oz., 15c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

## Rutabagas

**CULTURAL DIRECTIONS.** One ounce to 100 feet of drill; one pound to the acre, if sown in drill rows. Spring sowing should be done very early, so that the 'bagas may get their growth before hot weather, or they will be pithy and bitter. For main crop sow in July or August.

**AMERICAN PURPLE TOP.** A hardy, productive variety, with small neck. Roots are large, globe-shaped, with small taproot. Color bright yellow with purple top. Flesh solid, tender and sweet. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

**LONG ISLAND IMPROVED.** Grows very large. Purple top, yellow below; flesh yellow. Excellent 'bagas for either table use or stock feeding. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.



American Purple Top Rutabagas

# Radishes

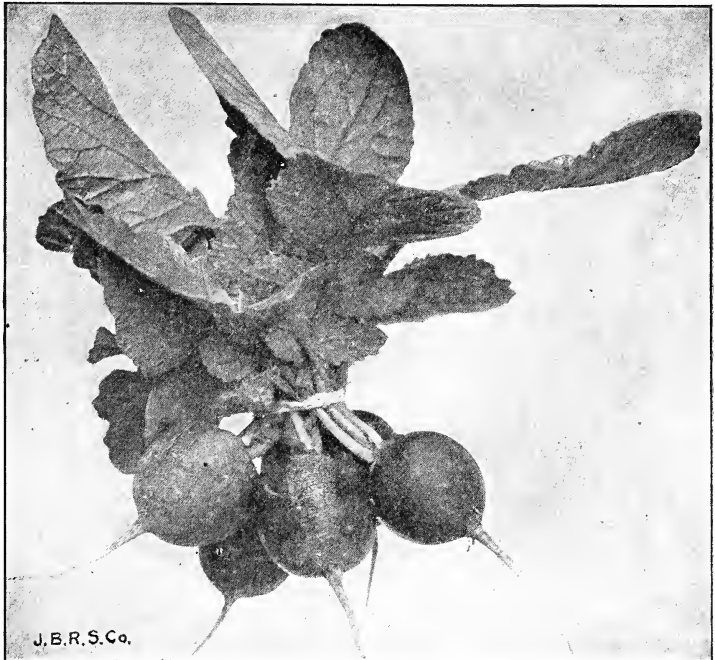
**CULTURAL DIRECTIONS.** One ounce to 100 feet of drill; about five pounds to the acre. Sow in rows about 12 inches apart in rich, sandy loam. Use no fresh manure, as the radishes will not grow smooth and will be wormy. Later sowings can be made at intervals during the summer. Seeds of winter radishes should be sown in July or August, and radishes can be kept during the winter if covered with sand and kept in a cool cellar.

**GRAND RAPIDS FORCING.** (See Specialties.) Oz., 10c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

**VICK'S SCARLET GLOBE.** We have an exceptionally fine stock of this grand variety, which has been tested by having crops grown both in greenhouses and outdoors. Our new stock will not be sold until it is tested. It is one of the earliest of the forcing radishes, and does equally as well for outdoor culture. Roots are globe-shape, of fair size, not apt to be pithy, small tops, crisp and tender. Color a bright scarlet. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**COOPER'S SPARKLER.** White tip, quite similar to Scarlet Turnip White Tip as to size and time of maturity, only the Sparkler is more round or ball-shaped, and the white extends farther up the radish, making a more attractive bulb. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**FRENCH BREAKFAST.** Of oblong shape, small, quick growing, color rose scarlet, with small white tip. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.



Vick's Scarlet Globe Radishes

**SCARLET TURNIP, WHITE TIPPED.** Round, deep scarlet, shading to a white tip at the bottom. Very early. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**CRIMSON GIANT.** A large, round, red, early radish of the Scarlet Globe type. Not quite so early, and has too large leaves to be a good forcing radish, but fine for out-door growing, and will grow large without getting pithy. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

**ICICLE.** One of the earliest long varieties, white throughout. Very crisp and tender. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

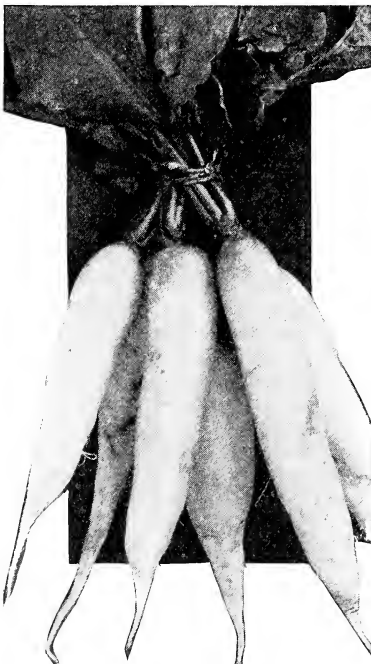
**LONG SCARLET SHORT TOP.** Roots are smooth and tender, with very short tops. Color bright carmine red. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**HALF LONG DEEP SCARLET.** A half long, of a beautiful deep scarlet color. Does not become pithy as soon as long scarlet varieties. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

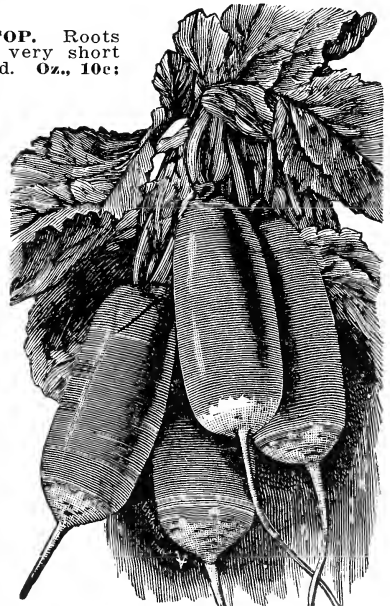
**LONG BLACK SPANISH.** One of the latest and hardest varieties for winter use; roots eight to nine inches long, two to three inches in diameter, and nearly black in color. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**ROUND BLACK SPANISH.** Round, three to four inches in diameter. Skin almost black; flesh white, crisp and pungent. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

**CHINESE ROSE.** Roots four or five inches long, blunt at both ends, about two inches thick. Skin smooth, and bright, deep rose color. Flesh white and crisp. One of the best winter sorts. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.



Icicle Radishes



French Breakfast Radishes

# Rhubarb

**CULTURAL DIRECTIONS.** One ounce will produce 100 plants. The seed should be sown in the spring in rows about eighteen inches apart and transplanted the next spring to permanent beds. Roots should be planted three or four feet apart, and well manured, either with well-rotted stable manure or **Pulverized Hen Manure**. Give thorough cultivation.

**VICTORIA.** One of the best market sorts, stalks a beautiful red. **Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.**

# Spinach

**CULTURAL DIRECTIONS.** One ounce to 100 feet of drill; eight to ten pounds per acre. Sow thinly in drills, twelve to fifteen inches apart and about half an inch deep. Thin plants to four inches apart in the row. Sow early for spring crop, in August for fall use; and if sown from the middle to last of September, and protected during the winter with a light covering of straw, it will be ready for use very early in the spring. Apply liberal top dressing of **Pulverized Hen Manure**.

**KING OF DENMARK.** (See Specialties.) **Oz., 10c; ¼ lb., 15c; 1 lb., 50c, postpaid.**

**ROUND SUMMER THICK LEAVED.** An old standard. Grand Rapids growers use this variety very largely for main crop for spring, summer and fall. **Oz., 10c; ¼ lb., 15c; 1 lb., 35c, postpaid.**

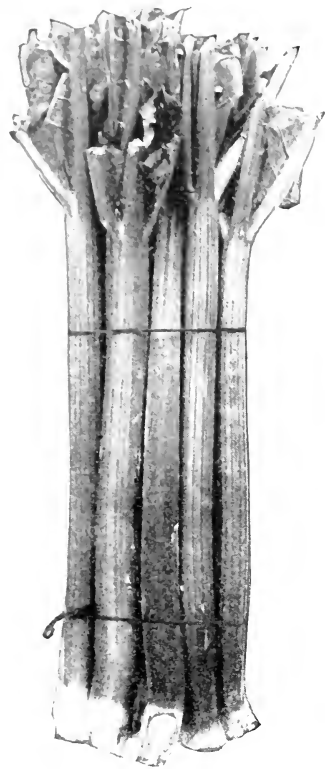
**LONG STANDING.** **Oz., 10c; ¼ lb., 15c; 1 lb., 35c, postpaid.**

**LONG SEASON.** Quite similar to Victoria. Plant makes a flat rosette, with very dark green, broad and pointed leaves. One of the best long-standing sorts. **Oz., 10c; ¼ lb., 15c; 1 lb., 35c, postpaid.**

**BLOOMSDALE SAVOY LEAVED.** Leaves are curled and crinkled like the Savoy Cabbage; hardy and most productive. **Oz., 10c; ¼ lb., 15c; 1 lb., 50c, postpaid.**

**VICTORIA.**

Makes a flat rosette with very short stems. The leaves are large, thick and wrinkled, blunt or rounded, and dark green in color. Stands hot



Victoria Rhubarb

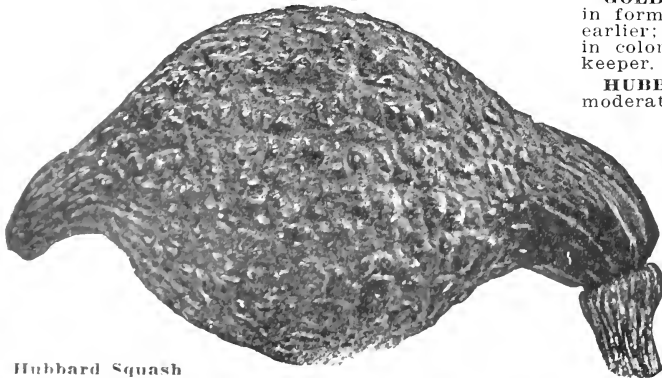
weather well; slow to go to seed. **Oz., 10c; ¼ lb., 15c; 1 lb., 35c, postpaid.**

# Squash

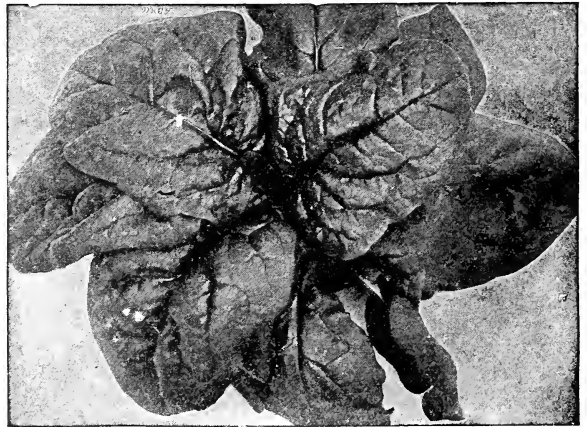
**CULTURAL DIRECTIONS.** For summer squash, one ounce to 25 hills; two to three pounds per acre. For winter squash, one ounce to ten hills; about three pounds per acre. After danger of frost is past plant eight to ten seeds to the hill for summer sorts, about four feet apart, the last of May, and winter varieties in hills about eight feet apart, from the middle of June to July first. Mix a liberal supply of **Pulverized Hen Manure** with the soil in each hill. Do not bruise or break the stems of winter squash when gathering. Store in a cool, dry place.

**EARLY WHITE BUSH SCALLOP.** Very early summer Squash, also known as Patty Pan. **Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.**

**EARLY YELLOW BUSH SCALLOP.** Identical with white Bush, except in color, which is yellow. **Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.**



Hubbard Squash



Victoria Spinach

**GIANT SUMMER CROOKNECK.** Largest and one of the earliest summer varieties. Fruit large, very warty; color deep orange. **Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.**

**GOLDEN HUBBARD.** Similar to the old Hubbard in form and habit, though smaller and decidedly earlier; shell moderately warted, rich orange red in color; flesh deep orange, of fine quality; good keeper. **Oz., 10c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.**

**HUBBARD.** The standard winter Squash. Shell moderately warted; deep dark bronze green; flesh bright yellow, fine-grained, thick and dry. **Oz., 10c; ¼ lb., 30c; 1 lb., \$1.50, postpaid.**

**CHICAGO WARTED HUBBARD.** Similar in quality and form to the Hubbard, but fruit larger and a little later. **Oz., 10c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.**

**TABLE QUEEN.** A Squash fit for a Queen. Cut in half and baked for twenty minutes, it is delicious. Wonderful producer. The fruits are from six to eight inches long and four to six inches in diameter. The shell is hard and smooth. Color dark green with sometimes a blotch of red at pointed end. Will keep as long as the Hubbard. **Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.**



# Tomato

**CULTURAL DIRECTIONS.** One ounce will produce about 3,000 plants; about 5,000 plants to the acre. Tomatoes do best on warm, sandy, rich soil, and make a rapid and unchecked growth in the early part of the season. For main crop, sow seed in greenhouses or hotbeds from the middle of March to the first of April. Transplant to the open field from last of May to June first. Spray regularly from the seed bed to the field, to prevent blight.

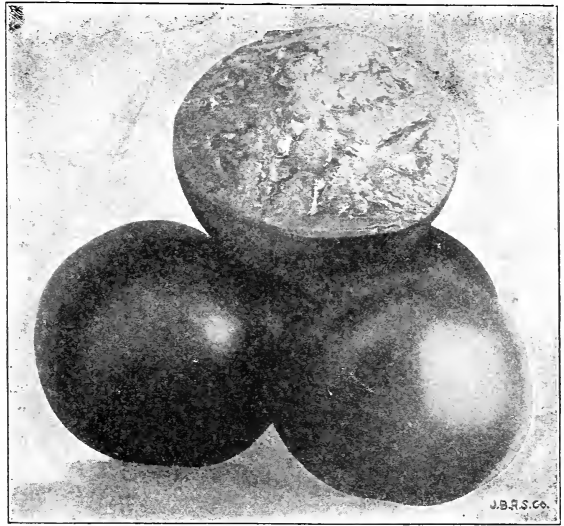
**JOHN BAER.** An early, productive, red Tomato, on the order of the Chalk's Jewel. Splendid producer. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

**DWARF STONE.** Oz., 30c; ¼ lb., \$1.15; 1 lb., \$4.00, postpaid.

**EARLY MICHIGAN.** Oz., 20c; ¼ lb., 70c; 1 lb., \$2.50, postpaid.

**PONDEROSA.** A very large, purple fruited Tomato; solid, with but few seeds, and not acid. Splendid for slicing. Oz., 40c; ¼ lb., \$1.30; 1 lb., \$5.00, postpaid.

**GRAND RAPIDS FORCING.** (See Specialties.) Oz., \$2.00; ¼ lb., \$6.00; ½ lb., \$9.00; 1 lb., \$18.00, postpaid.



John Baer Tomatoes

**BONNY BEST.** As early as Chalk's Jewel. Fruit smooth, solid and uniform. Produced in clusters in center of plant. One of the most productive; color bright red; good shipper. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

**WAYAHEAD.** (See Specialties.) Oz., 75c; ¼ lb., \$2.75; 1 lb., \$10.00, postpaid.

**RED HEAD.** (See Specialties.) Oz., 60c; ¼ lb., \$2.25; 1 lb., \$8.00, postpaid.

**THE BURBANK.** Oz., 25c; ¼ lb., 90c; 1 lb., \$3.50, postpaid.

**THE LANDRETH.** Oz., 25c; ¼ lb., 90c; 1 lb., \$3.50, postpaid.

**RED ROCK.** A very fine selection of the Matchless type, medium size, round, smooth, and a bright red. Fine for canning. Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

**IDEAL FORCING.** (See Specialties.) Packet, 100 seeds, 50c; oz., \$5.00, postpaid.

**EARLIANA.** Oz., 30c; ¼ lb., \$1.15; 1 lb., \$4.00, postpaid.



Bonny Best Tomatoes

**CHALK'S EARLY JEWEL.** An exceptionally fine early variety. About ten days later than the Earliana. Fruit round, smooth and solid. Color crimson. Extremely productive. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

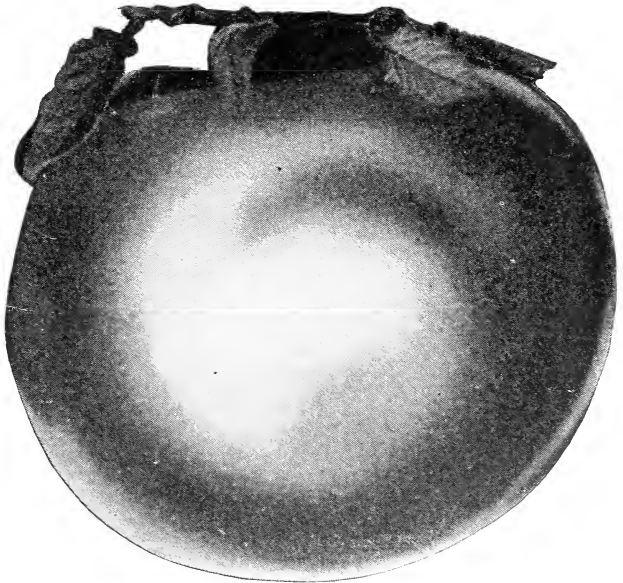
## Salsify or Vegetable Oyster

**CULTURAL DIRECTIONS.** One ounce to 75 feet of drill; five or six pounds to the acre. Sow the seed early in the spring in drills twelve inches apart and one inch deep. Thin to four or five inches apart. The roots will be ready for use in October, when a supply should be taken up and stored like carrots for winter use. Like parsnips, they may be left in the ground all winter and dug as soon as the ground is thawed.

**MAMMOTH SANDWICH ISLAND.** Roots large and uniform; pure white. Oz., 25c; ¼ lb., 80c; 1 lb., \$3.00, postpaid.

## Tobacco

**CONNECTICUT SEED LEAF.** A hardy cigar variety for home use. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.



Ponderosa Tomato

# Turnip

**CULTURAL DIRECTIONS.** One ounce to 150 feet of drill; one pound per acre. For main crop, sow in July or August. Sow either broadcast or in drills.

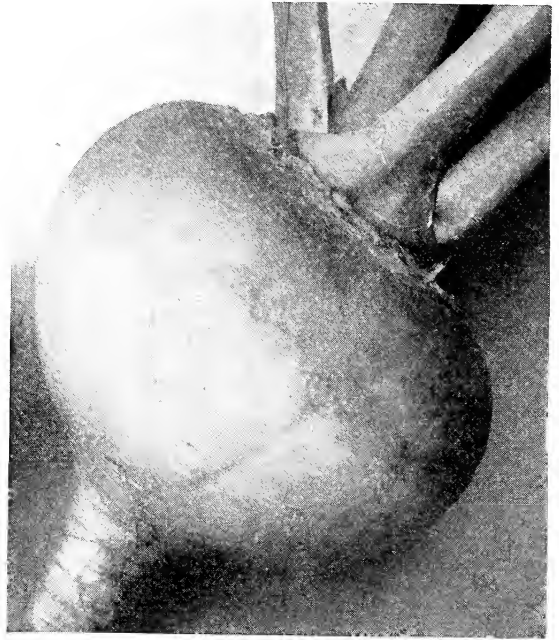
**EXTRA EARLY WHITE MILAN.** The earliest bulbs, small, clear white, and flat. One of the best for early bunching. **Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.**

**WHITE EGG.** An early egg-shaped variety. Roots smooth, clear white. One of the best for market. **Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.**

**PURPLE TOP WHITE GLOBE.** Not so early as White Egg; perfect globe in shape. Flesh and skin white, colored purple or red above ground. Very fine grained and sweet. The most attractive turnip and best seller. **Oz., 10c; ¼ lb., 20c; 1 lb., 60c, postpaid.**

**PURPLE TOP STRAP LEAVED.** A very early, flat variety, medium size; purple or red above ground and white below. **Oz., 10c; ¼ lb., 20c; 1 lb., 60c, postpaid.**

**COW HORN.** Roots long, slightly crooked; clear white. Often sown to plow under for fertilizer. **Oz., 10c; ¼ lb., 20c; 1 lb., 60c, postpaid.**



**Purple Top Strap-Leaved Turnip**

**ROBERTSON'S GOLDEN BALL.** Tops small, roots medium size, round, smooth and deep yellow. Fine grained, flesh firm, crisp and sweet. **Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.**

**YELLOW GLOBE.** **Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.**

**YELLOW ABERDEEN.** **Oz., 10c; ¼ lb., 20c; 1 lb., 60c, postpaid.**



**J. B. R. S. Co.**

**Purple Top White Globe Turnip**

**DILL.** Used for flavoring pickles. **Oz., 15c, postpaid.**

**LAVENDER.** Leaves fragrant. **Oz., 20c, postpaid.**

**SWEET MARJORAM.** Used for seasoning. **Oz., 20c, postpaid.**

## Herbs

For early use, sow seed in hotbed or in open ground in May, in rows one foot apart. Cover very lightly and thin to six inches apart in the row. They should be cut on a dry day, just before they come into full blossom. Tie in bunches and keep where they will dry quickly.

**ANISE.** Used for flavoring. **Oz., 15c, postpaid.**

**CARAWAY.** Seeds used for flavoring. **Oz., 15c, postpaid.**

**SAGE.** Very aromatic. **Oz., 40c, postpaid.**

**SUMMER SAVORY.** Leaves used for flavoring soups. **Oz., 20c, postpaid.**

**THYME.** Used for seasoning. **Oz., 40c, postpaid.**



# FLOWER SEEDS

Happy are they who can look back with loving thoughts to the beautiful Old-Fashioned Flower Gardens their mothers or grandmothers grew and loved.

**AGERATUM.** Dwarf. Mixed. Pkt., 5c; oz., \$1.00.

**ALYSSUM (Sweet).** Little Gem. Pkt., 5c; oz., \$1.00.

**ANTIRRHINUM.** (Snapdragon.) Dwarf. Mixed. Pkt., 5c; oz., \$1.25.

**ASTERS.** Queen of the Market. Early, mixed. Pkt., 5c; oz., \$1.00.

Giant Comet. Mixed. Pkt., 5c; oz., \$1.00.

Crego. Mixed. Pkt., 5c; oz., \$1.50.

**CANDYTUFT.** Mixed. Pkt., 5c; oz., \$1.00.

**CALENDULA.** (Pot Marigold.) Pkt., 5c; oz., \$1.00.

**CALLIOPSIS.** Mixed. Pkt., 5c; oz., \$1.00.

**CARNATION.** Tall Marguerite. Mixed. Pkt., 5c; oz., \$2.00.

Dwarf Marguerite. Mixed. Pkt., 5c; oz., \$2.00.

**CANTERBURY BELL.** Single. Mixed. Pkt., 5c; oz., \$1.00.

Double. Mixed. Pkt., 5c; oz., \$1.50.

Cup and Saucer. Pkt., 5c; oz., \$2.00.

**CASTOR BEANS.** Zanzibarensis. Pkt., 5c; oz., 20c.

**COREOPSIS.** Perennial. Mixed. Pkt., 5c; oz., \$1.00.

**COSMOS.** Early Flowering. Mixed. Pkt., 5c; oz., \$1.00.

**COXCOMB.** Dwarf. Mixed. Pkt., 5c; oz., \$1.00.

Tall. Mixed. Pkt., 5c; oz., \$1.50.

**CHINESE WOOLFLOWER.** (Scarlet.) Pkt., 5c; oz., \$2.50.

**DAISY.** Bellis or Double Daisy. Mixed. Pkt., 5c; oz., \$3.00.

**DELPHINIUM OR LARKSPUR.** Giant Hyacinth. Annual; mixed. Pkt., 5c; oz., 75c.

Formosum. Perennial; mixed. Pkt., 5c; oz., \$3.00.

**DIANTHUS OR PINKS.** Chinese Double. Mixed. Pkt., 5c; oz., 75c.

**DIGITALIS OR FOXGLOVE.** Mixed. Pkt., 5c; oz., \$1.00.

**EVERLASTING FLOWERS.** Mixed. Pkt., 5c; oz., 75c.

**FORGET-ME-NOT.** Mixed. Pkt., 5c; oz., \$1.50.

**FOUR O'CLOCK.** (Marvel of Peru.) Mixed. Pkt., 5c; oz., 30c.

**GAILLARDIA.** (Blanket Flower.) Mixed. Pkt., 5c; oz., 75c.

**GOURDS.** Mixed. Pkt., 5c; oz., 25c.

**HOLLYHOCK.** Double, mixed. Pkt., 5c; oz., \$1.50.

**MARIGOLD.** Legion of Honor. Dwarf mixed. Pkt., 5c; oz., 75c.

Tall French. Mixed. Pkt., 5c; oz., 75c.

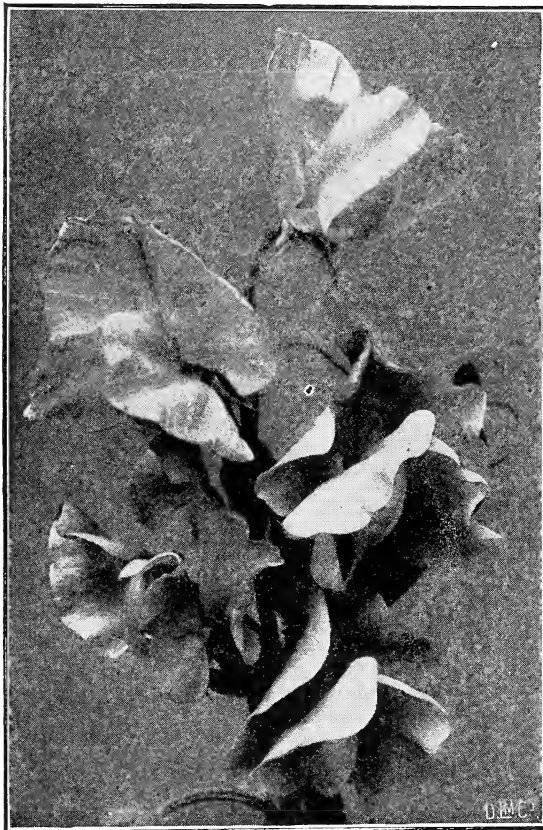
**MIGNONETTE.** Machet. Mixed. Pkt., 5c; oz., \$1.00.

**MORNING GLORY.** Common. Mixed. Pkt., 5c; oz., 20c.

Japanese. Mixed. Pkt., 5c; oz., 25c.

**NASTURTIUMS.** Dwarf. Mixed. Pkt., 5c; oz., 15c.

Tall. Mixed. Pkt., 5c; oz., 15c.



Sweet Peas

**PANSY.** Giant Mixture. Flowers very large, and great diversity of colors. This mixture contains all of the good ones. Pkt., 5c; oz., \$5.00.

Good Mixture. Not so many colors as the Giant Mixture, but flowers large, and good assortment of colors. Pkt., 5c; oz., \$1.50.

**PETUNIA.** Large Flowering. Mixed. Pkt., 5c.

**PHLOX DRUMMONDI.** Splendid mixture. Pkt., 5c; oz., \$2.00.

Decussata. (Perennial.) Pkt., 5c; oz., \$2.50.

**POPPY.** Carnation Flowered. Mixed. Pkt., 5c; oz., 25c.

Shirley. Pkt., 5c; oz., 40c.

**PORTULACA.** (Rose Moss.) Double, mixed. Pkt., 5c; oz., \$3.00.

**SALVIA SPLENDENS.** Mixed. Pkt., 5c; oz., \$2.00.

**SWEET PEAS.** Grandiflora Types. Mixed. Pkt., 5c; oz., 10c.

Spencer. Mixed. Pkt., 5c; oz., 20c.

**SWEET WILLIAM.** Special mixture. Pkt., 5c; oz., \$1.50.

**VERBENA.** Mammoth Mixed. Pkt., 5c; oz., \$1.50.

**ZINNIA.** Mammoth Mixed. Pkt., 5c; oz., \$1.00.

# FIELD AND GRASS SEEDS



## Alfalfa

The acreage seeded to Alfalfa in Michigan is about equal to that devoted to June or Medium Clover. Our sales of Alfalfa last season were fully fifty-fifty with the Medium. In five years more, we believe that the acreage of Alfalfa in this state will be greater than that of all other clovers combined, except perhaps Sweet Clover. Our Alfalfa seed is all furnished by the Michigan State Farm Bureau, and is all grown either in Michigan or the Northwest, and is adapted to our climate.

Every ton of Alfalfa hay removes from the soil eleven pounds of phosphoric acid, which cannot be replaced by plowing under cover crops or manure. And unless Acid Phosphate, ground phosphate rock, or bone meal is applied, the soil soon becomes unbalanced, and will not produce good yields of grain. Even if the entire crop of either Alfalfa or Sweet Clover is plowed under, it only puts back the amount of phosphoric acid it has taken from the soil. At least two hundred (200) pounds of 16 per cent Acid Phosphate per acre should be sown with the seed, and the same amount should be applied as a top dressing every year thereafter so long as the field remains in Alfalfa.

**GRIMM ALFALFA** was brought to the United States by a Mr. Grimm, who brought with him from the old country a few seeds of Alfalfa. He settled in Minnesota, and the seed was sown and produced exceptionally hardy plants, and when it was eventually recognized as a superior strain, it became known as Grimm Alfalfa. From its adopted home it rapidly spread over the Northwest, and its superiority is rapidly superseding the Common Alfalfa. We have never known Our Grimm Alfalfa seed is grown by Co-operative Growers' organizations, and certified by the proper State officers in the state where grown, and guaranteed by the Michigan State Farm Bureau, and is scarified seed. Write for prices.

iority is now so generally proven that a failure in Michigan of true Grimm.

**ALFALFA (Common.)** Grown in Utah. The fields from which this seed was grown were carefully inspected by the Michigan State Farm Bureau. The seed is bright and plump, a beautiful golden color; free from dodder and all foul seeds. Scarified and carefully tested for germination. The high altitude of the mountain states insures hardiness. Write for prices.





Kentucky Blue Grass

## Grass Seeds

Our endeavor is to handle only the very best and purest Grass Seeds. We supply only the best and highest germinating seeds, and our prices are based on supplying this quality.

**White Clover (White Dutch).** Write for prices.

**Kentucky Blue Grass.** Write for prices.

**Red Top, Fancy.** Write for prices.

**ORCHARD GRASS.** Valuable for pasture. Will last longer on light soil than any other known grass. Makes good hay if cut before it becomes woody. Sow from a half bushel to two bushels per acre. Write for price.

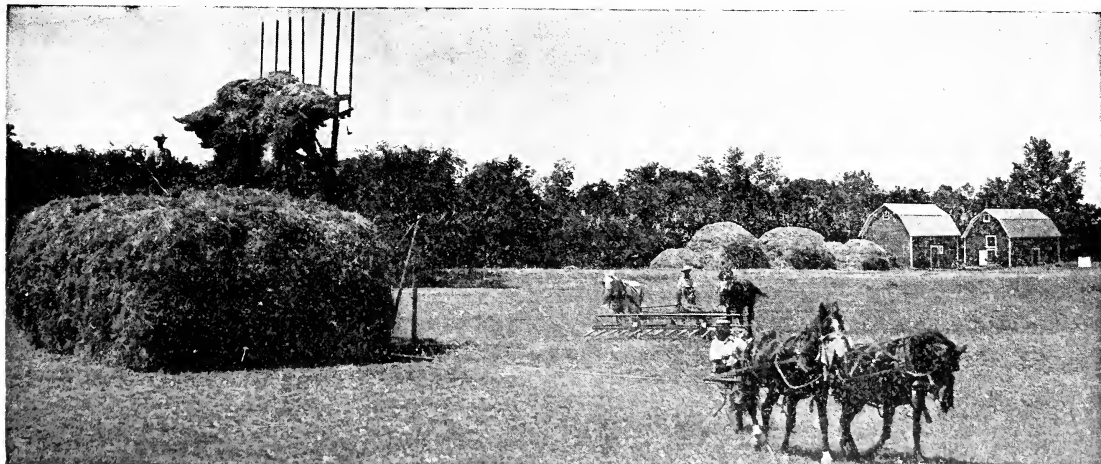
**KENTUCKY BLUE GRASS.** (June Grass.) One of the best grasses for permanent pasture. As it takes some time to become established, it is better to sow in mixtures. It is a perennial and prefers lime soil. Sow about 50 pounds per acre. Write for price.

**Red Top, Unhulled.** Write for prices.

**English Rye Grass.** Write for prices.

**RED TOP.** Valuable for hay or pasture on low, wet land. Sow hulled seed about 8 to 10 pounds per acre. Fancy, re-cleaned or solid seed, about 3 or 4 pounds per acre. Write for price.

**CANADIAN BLUE GRASS.** Perennial; 6 to 12 inches. Succeeds on soil too poor for Kentucky, and for a Michigan pasture grass we prefer it to Kentucky Blue Grass, as it is better adapted to Michigan weather conditions. It is well relished by stock of all kinds, and is especially good for milch cows. Sow it alone, about 40 pounds per acre. Write for prices.





# The CLOVERS

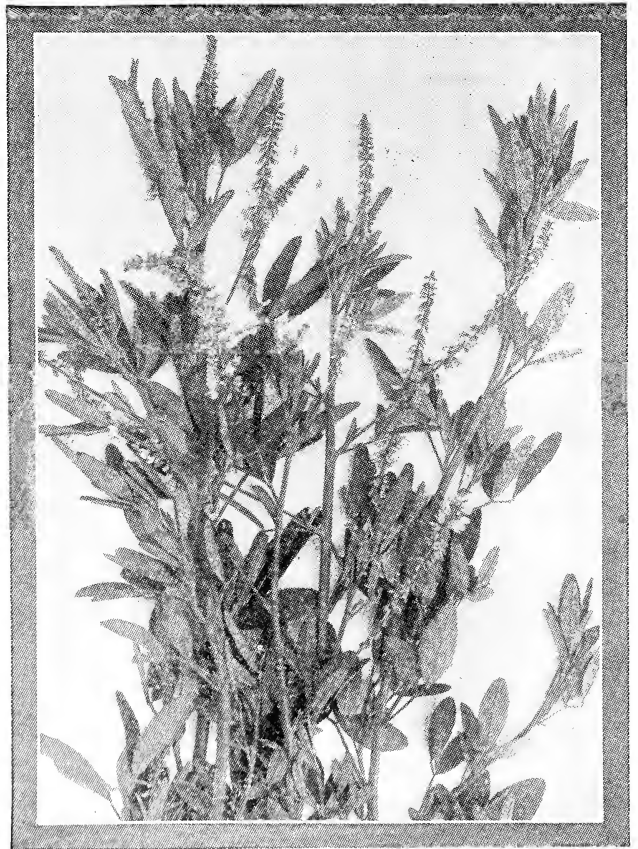


Medium  
Red Clover

**MEDIUM RED OR JUNE CLOVER.** By far the most important of all clovers for practical purposes. It is a perennial, and grows about two feet high; very valuable for plowing under to enrich the soil, adding humus and nitrogen. We handle only one grade—the best—as it is folly to buy anything else. Sow in spring or fall, 8 to 12 pounds per acre, if used without other grasses. Farm Bureau prices.

**MAMMOTH OR LARGE RED CLOVER.** Mammoth Clover is quite distinct from Medium, growing to nearly twice its size; is coarser and a little later. It can be grown successfully on poorer soil than Medium Clover. It is used extensively for building up worn-out land. Sow about 8 to 12 pounds per acre when sown alone. Farm Bureau prices.

**ALSIKE CLOVER.** A perennial, and the most hardy of all clovers. It prefers damp, loamy soil. It is extremely leafy, making hay of a fine texture. Does not readily winter kill, and is valuable to sow with other clovers and grasses, as it increases the yield of hay. It is the best clover for moist soil. Sow either in spring or fall, about six pounds per acre, when sown alone. Farm Bureau prices.



White Blossom Sweet Clover

**WHITE BLOSSOM SWEET CLOVER.** Once considered a noxious weed; now nearly equal in value to Alfalfa. White Sweet Clover is a biennial, and does not last so long as its cousin, Alfalfa, but it has a great mission. In pasture it will produce a greater flow of milk than even Alfalfa, and as much feed. Cattle are less liable to bloat. Stock soon learn to like the hay, and even prefer it to Alfalfa. We sold nearly twice as much Sweet Clover seed last year as Alfalfa. Write for prices.



A Field of Timothy

## Sudan Grass

A tall annual grass reaching the height of 7 to 9 feet when planted in rows and cultivated, and 4 to 5 feet when sown broadcast. The hay is greatly relished by all stock, and has exceptionally high feeding value. Is adapted to most soils. Farm Bureau prices.

## Timothy

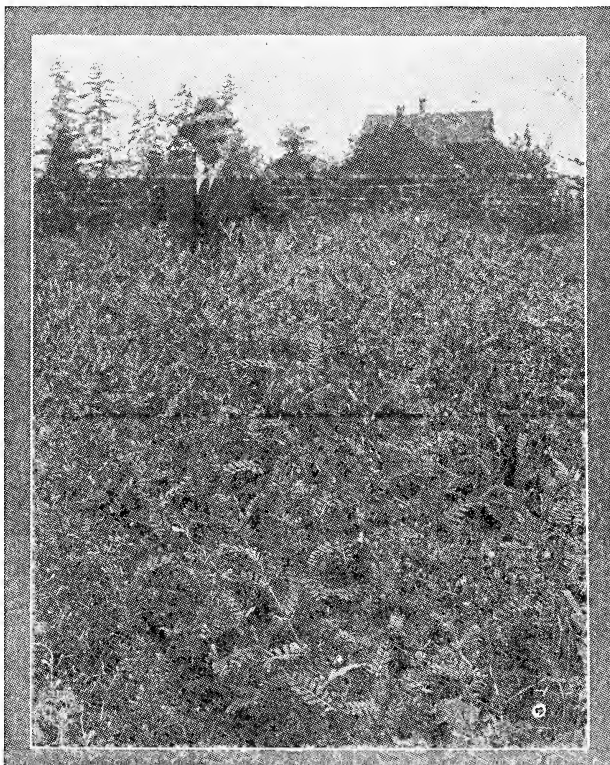
The most important of all grasses for hay, and is adapted to a wider range of conditions than any other variety of grass. It is the hardiest of all grasses and excels in feeding value. Sow early in the spring or fall, 10 to 12 pounds per acre if sown alone; less if mixed with other grasses. Farm Bureau prices.

## Millet

Usually grows from 2½ to 4 feet high, and makes excellent hay. For hay sow broadcast 25 to 30 pounds per acre. May 1st to August 1st. Does well on dry and light soils. Farm Bureau prices.

## Sand Vetch

Sand or Hairy Vetch shares with Sweet Clover the honor of giving the best results in restoring fertility to worn-out land or making poor, sandy soils productive. Sand Vetch has no equal as a cover crop. It can be sown in the corn field just after the last cultivation, and it will make a mass of green stalks and leaves to plow under about the middle of May; or it may be sown after harvesting oats and plowed under for corn the next spring. Hay made from Sand Vetch is about three per cent higher in protein content than Alfalfa hay, and is more eagerly eaten by stock. When sown with oats or any spring grain, it will come on after crop is harvested and make splendid fall pasture, and can be plowed under the next spring for corn or potatoes. Always inoculate the seed unless Sand Vetch has been grown on the land within one or two years. Sow from 30 to 40 pounds per acre. Our Sand Vetch is better than 99 per cent pure. Farm Bureau Seed at Farm Bureau prices.



Sand Vetch



Leaming Fodder Corn

## Fodder Corn

Dry Fodder Corn is the most satisfactory substitute for hay. It nearly if not quite equals in feeding value timothy and clover. All stock eat it greedily and thrive on it.

It yields from three to five tons of dry fodder per acre, being a much larger yield than timothy and clover will give, making a far more profitable forage crop to grow.

It can be sown as late as July first, with a reasonable assurance of a fair growth of fodder, making it an ideal catch crop, as the work can be done after the haying rush is over. It can be sown at the usual corn-planting time and by sowing rape

between the rows after the last cultivation, it makes splendid summer pasture for hogs or sheep.

### Leaming Fodder Corn

This variety is preferred by most dairymen for filling silos, for the reason that the corn matures the large ears (in any ordinary season it will ripen), and gives more grain in the ensilage. Stalks very large and leafy, and grows an immense amount of forage to the acre. It requires from one peck to one-half bushel of seed per acre, drilled in rows one way. Farm Bureau prices.

### Red Cob Ensilage

A gigantic Southern white corn, producing immensely large ears, rarely maturing in this latitude. The stalks grow from 12 to 15 feet in height, with long, broad leaves from the ground to the tassel. Stalks very thick at the butt, juicy, tender and as sweet as sugar corn; and all stock eat it with relish. Many dairymen prefer it for the silo, for the reason that it produces such an enormous amount of silage (from 15 to 25 tons per acre). It is especially valuable for the dry fodder when cut and kept in the shock until fed. It will produce a good crop of forage, even when sown as late as July. Red Cob Ensilage is one of the best crops to raise for the purpose of killing quack grass or other foul weeds when the land is badly infested. For killing quack grass plow the sod late in the fall, which, with the freezing of the roots will greatly injure the plants, cultivate with a spring-tooth harrow every week in April and May. Plant Red Cob ensilage in drills, using one bushel of seed per acre, smothering the quack and other weeds. For silos or fodder, sow from one-half to one bushel per acre. Farm Bureau prices.

### Eureka Ensilage Corn

Will produce more tons of silo corn per acre than even Red Cob Ensilage corn. Stalks will grow 12 to 15 feet in height, with broad leaves from the ground up. Each stalk will bear from one to three long ears. Very rapid grower and can either be planted in hills or in drill rows. Farm Bureau seed. Write for prices.



Field of Ensilage Corn



# FERTILIZERS

**We Are Unable to Get Prices On Fertilizers at Present, But Our Prices Will Be Right Or We Cannot Expect to Serve You**

The mixed goods described below are all manufactured by the Virginia-Carolina Chemical Company.

**V-C INDIA**

2-8-10; 2% available Nitrogen; 8% available Phosphoric Acid; 10% available Potash. High Grade Complete is well adapted to muck soil and a specially good fertilizer for Celery, Onions, Potatoes and all root crops. Write for prices.

**V-C MICHIGAN SPECIAL**

2-10-4; 2% available Nitrogen; 10% available Phosphoric Acid; 4% available Potash. Michigan Special should give satisfactory results on the lighter soils and is well fitted for corn, where an application of Potash is needed; also a good fertilizer for general crop on soil deficient in Phosphoric Acid and Potash. Write for prices.

**V-C SPRINGFALL FERTILIZER**

2-12-2; 2% Nitrogen; 12% Phosphoric Acid; 2% Potash. The 2-12-2 is probably the best all-around and complete fertilizer and has been used to a great extent throughout Michigan. It is usually applied to crops such as corn, wheat and oats on soils which have not been well manured or upon which legumes in regular rotation have not been grown. This formula should be a good buy.

**V-C 10-10 ACID AND POTASH**

10% Phosphoric Acid; 10% Potash. Especially adapted for muck soils or land lacking Phosphoric Acid and Potash and well supplied with Nitrogen. For celery, lettuce or root crops. Write for prices.

**V-C SUGAR BEET SPECIAL**

3-8-4; 3% available Nitrogen; 8% available Phosphoric Acid; 6% available Potash. Special Truck gives excellent results for potatoes, vegetables of all kinds, is well fitted for corn on soils requiring Potash; in fact, a high grade fertilizer for any crops in which the increased yield will sell for enough to pay the cost of higher priced goods. Write for prices.

**V-C TIP TOP**

2-8-16; 2% Nitrogen; 8% Phosphoric Acid; 16% Potash. Celery and Potato Special. Test plots last year proved that for growing celery it was the most profitable fertilizer to use. Celery fertilized with 2-8-16 was harder, more crisp, heavier crop and better keeper than where manure alone or fertilizer with less potash was used. On muck soils where celery and onions are the main crop we recommend 2-8-16 above all other fertilizers. Write for prices.

**V-C MUCK SPECIAL**

0-8-24; 8% Phosphoric Acid; 24% Potash. For late Celery on muck land grows firmer Celery, better keeping and better quality. Write for prices.

**V-C SPECIAL FRUIT GROWERS**

6-8-0; 6% Ammonia; 8% Phosphate. The best all-around fruit fertilizer for great diversity of soils.

**V-C BIG POTATO AND TRUCK**

3-10-4; 3% Ammonia; 10% Phosphoric Acid; 4% Potash. For potatoes and general garden truck.

**AMERICAN MURIATE OF POTASH**

59% Potash. While the American Potash ton price is a little higher than the American mechanical condition is so much better, fine granulated and does not cake and can be distributed more evenly. Write for prices.

**IMPORTED MURIATE OF POTASH**

The best form of Potash for fruit or muck vegetable crops. All root crops draw heavily on the soil for Potash, especially potatoes and onions. Most muck soils are lacking in Potash and celery will grow a much firmer stalk of far better quality when either a high grade fertilizer, high in Potash or Muriate of Potash is applied in liberal quantities. Write for prices.

**NITRATE OF SODA**

Nitrate of Soda in its commercial form contains about 15½% of Nitrogen, equal to about 19½% of Ammonia.

As the source of Nitrogen or Ammonia in home mixed fertilizers, Nitrate of Soda is the most desirable, particularly for all quick-growing crops and when early maturity is desired.

**SULPHATE OF AMMONIA**

Used largely in orchards for practically all kinds of fruit; especially valuable for melons and tomatoes, which thrive better in a slightly acid soil. A form of nitrogen which is coming into general use with fruit men and truck growers. Write for prices.

**V-C ACID PHOSPHATE**

Guaranteed Analysis

Available Phosphoric Acid .....16% This is an exceptionally good grade of Acid Phosphate and often exceeds the guaranteed analysis.

If you want Acid Phosphate for home mixing or for use by itself, we are sure these goods will please you.

We are in position to name the very best prices consistent with quality goods in carloads or in mixed cars with other fertilizer. Let us quote you. Write for prices.

Acid Phosphate will increase the yield of wheat. Try it. It will pay you.

**V-C ACID PHOSPHATE**

24% available Acid Phosphate. The unit of available Phosphoric Acid is cheaper in the higher grade. Why pay freight on the cheaper 16%? Write for prices.

**V-C PURE GROUND BONE**

Guaranteed Analysis

Ammonia (Bone) .....	3.83%
Nitrogen (Bone) .....	3.15%
Phosphoric Acid .....	24.50%
Equivalent to Bone Phos. of Lime .....	53.53%

This is a soft, stamped bone and the stable article for fall seeding. It is wholly animal matter. It is especially adapted for use on grain, alfalfa, meadows, and for greenhouse purposes. Write for prices.

**PULVERIZED HEN MANURE**

ANALYSIS—Nitrogen 4.1%.  
 Equal to Ammonia 5%.  
 Phosphoric Acid 2.7%.  
 Equal to Bone Phosphate 6%.  
 Potash 1.3%.

Pulverized Hen Manure analysis shows nearly double the plant food of Pulverized Sheep Manure and is sold nearly as cheaply. The Hen Manure is collected mainly from unloading cars in which poultry has been shipped, and is dried and finely ground so that it can be evenly applied, and not burn vegetation. Price, \$2.50 per 100 lbs.

**PULVERIZED SHEEP MANURE**

This is collected from the Stock Yards, heated to kill weed seeds, ground and bagged in 50 and 100-pound bags. Price, \$2.50 per 100; 50 lbs. for \$1.50.

**SOLVAY GROUND LIME**

Practically all the land in Michigan needs Ground Lime Rock to neutralize the acid in the soil. In other words, to sweeten the soil. It is practically indispensable for alfalfa and similar crops. In fact, should be used freely on most land for any crop. Most lawns would be benefited by an application of Ground Lime Rock.

In Bulk, 200 lbs., f. o. b. Sibley, Mich. Write for prices.  
 In sacks, 100 lbs., f. o. b. Sibley, Mich. Write for prices.  
 Special carload prices on application.  
 Special price when loaded in mixed carloads with other fertilizers.

**HOME MIXERS' FERTILIZER TABLE**

Any Formula at a Glance

Exact number of pounds of each material required for the equivalent of 2000 lbs. of Ready Mixed Fertilizer of analysis desired.

age or units desired	from Ammonia Nitrate of Soda	from 14% Acid Phosphate	from 16% Acid Phosphate	Potash from Muriate	Potash from Kaint 12%
1	110	143	125	40	166
2	220	286	250	80	333
3	330	429	375	120	500
4	*440	571	500	160	667
5	550	714	625	200	833
6	660	*857	750	240	1000
7	770	1000	875	280	1167
8	880	1143	1000	320	1333
9	990	1286	1125	360	1500
10	1100	1429	1250	*400	1667
11	1210	1571	1375	440	1833
12	1320	1714	1500	480	2000

Example:—To make a fertilizer containing 4 per cent Ammonia, 6 per cent available Phosphoric Acid, 10 per cent Potash. By looking in the percentage column for 4 per cent and in the Nitrate column we find 440 lbs. in the 16 per cent Acid Phosphate column opposite 6 per cent we find 750 lbs., and in the Muriate of Potash column opposite 10 per cent we find 400 lbs., the sum of the 440 lbs., 750 lbs., and 420 lbs. is 1,610 lbs., which is equivalent to and contains the same amount of plant food as 2,000 lbs. of the 4-6-10 manufactured fertilizer.  
 Any combination can be figured in the same way.

**RED SNAPPER PLANT FOOD**

A highly concentrated fertilizer for house plants, ferns and flowers. Equally as good for outdoor flowers and vegetable garden. Made from thoroughly sterilized, aerated, steam-dried fish bones and nitrogenous cartilage, together with pulverized tobacco stems.

ANALYSIS:—Nitrogen 5%; available Phosphoric Acid 4%; insoluble Phosphoric Acid 8%; total Phosphoric Acid 12%; Potash 1.25%.

10-ounce can, regular price, 25c. Our price, 20c.  
 24-ounce can, containing 8-oz. pkg. Calcium Hydro-Oxide for Acid soils. Regular price 50c. Our price, 40c.

If in need of larger quantities will make reduced prices on several packages, 3 for \$1.00.

# INSECTICIDES

## "NICO FUME" LIQUID

Nicotine Solution for fumigating or spraying. A highly refined solution of "free" Nicotine, containing 40 per cent of Nicotine.

8-lb. tins .....	\$15.00 per tin
4-lb. tins .....	8.00 per tin
1-lb. tins .....	2.25 per tin
1/4-lb. tins .....	.75 per tin

## "BLACK LEAF 40"

(Sulphate of Nicotine)

A concentrated solution of Nicotine Sulphate containing 40 per cent Nicotine. For sheep and cattle dipping and spraying for Pear Thrips, Green Aphis, Pear Psylla, Hop Louse, Black Aphis, Woolly Aphis, etc.

10-lb. tins .....	\$13.50 per tin
2-lb. tins .....	3.50 per tin
1/2-lb. tins .....	1.25 per tin
1-oz. bottle .....	.35 each

## HALL'S FREE NICOTINE

This powerful insecticide contains Nicotine in the free state, particularly adapted for indoor spraying. Diluted according to directions, it makes a deadly spray costing only 2 1/2 cents per gallon.

8-lb. tins .....	\$15.00 per tin
2-lb. tins .....	4.00 per tin
1/2-lb. tins .....	1.40 per tin

## HALL'S NICOTINE FUMIGATOR

A specially prepared fumigating compound saturated with pure Nicotine. Easy to use—because a conical measuring dipper is inclosed in each tin. Economical—because you can measure out the exact quantity needed. One cone produces 7000 cubic feet of deadly Nicotine fumes. Three cones will fumigate a house (20x100 feet) at a cost of 25 cents.

10-lb. tins .....	\$8.50 per tin
2 1/2-lb. tins .....	2.50 per tin
1-lb. tins .....	1.25 per tin

## HALL'S NICOTINE SULPHATE SOLUTION (40% Nicotine)

An efficient insecticide for plant lice and similar soft-bodied insects attacking plauts and trees.

Active ingredients—Nicotine .....	.40%
Inert ingredients .....	.60%

## PURE PARIS GREEN

This is strictly pure Paris Green of the very best quality and will give satisfaction. Write for prices.

1/4-lb. boxes .....	.....
1/2-lb. boxes .....	.....
1-lb. boxes .....	.....
2-lb. boxes .....	.....
5-lb. boxes .....	.....
14-lb. kits .....	.....
28-lb. kits .....	.....
56-lb. kits .....	.....
100-lb. kegs .....	.....

We also wholesale Paris Green and give special prices to dealers. It will pay dealers to get our prices before buying. We can save you money.

Remember, that we are large handlers of Paris Green and usually have stock for immediate shipment when others are out.

## CALSO

Kills Bugs and Worms

Calso, the perfect Potato, Tobacco, Tomato and Truck Crop spray, kills quickly all chewing insects, thus safeguarding the plants from injury, as the leaves of plants serve both as lungs and stomach, and any injury to them is sure to limit growth and production.

Increases the Yield

Calso is an excellent plant stimulant. Crops treated with Calso are always healthier, retain their foliage longer and are sure to produce maximum yields.

## PARA-DICHLOROBENZENE

Kills the Peach Tree Borer, and is recommended on trees six years of age or over.

Should be applied about the first of September in Michigan. In case fall application has not been made, a spring treatment should be made, but it is better to treat in the fall, after all the eggs have been hatched and one application will give a high degree of protection.

Write for price.

## DAIRY AND POULTRY FEEDS

WE CARRY A COMPLETE LINE OF DAIRY AND POULTRY FEEDS, AT PRICES THAT ATTRACT YOU. GIVE US A TRIAL ORDER—ONE POUND OR A CARLOAD

# MANSFIELD TIRES

*Built For Country Road Service*

THE building of a good tire is not a secret. It is a matter purely of the determination of the manufacturer.

Determination to use worthy materials, practical, proved-up construction and workmanship that takes pride in its product.

No detail of care, no expense has been spared to make Mansfield tires the best tires possible to build. The materials are selected with exacting care. Only the best is permitted to enter into their makeup.

Every Mansfield tire is made to express in terms of miles the maker's ideal of tire quality.

Thousands of motorists have proven their sturdy strength. The tough, durable tread designed with cup-like depressions which cling to the smooth surface of wet pavements and with many angles offering their sharp edges to muddy, slippery roads, is a safeguard against both wear and road skidding.

To use them once is to use them always.

On your car they will live up to their well earned reputation.

They are made in both Cord and Fabric types to fill your need for greater and better tire service.

## Mansfield Inner Tubes

Are made to resist heat—first by using live rubber of the highest grade and then compounding it with the right proportion of heat-resisting chemicals.

Special care in the workmanship and the vulcanizing process insures strength and toughness which means added service to the consumer that is unequalled with ordinary tubes. This extra service results in less cost and greater economy in the end.

Mansfield Inner Tubes are tested with air under pressure for twenty-four hours. They are then carefully inspected before they are put into the boxes.

Send for Price List

GRAND RAPIDS GROWERS' ASSOCIATION, Grand Rapids, Mich.

## NIAGARA DUSTING MATERIAL

### Standard Mixtures

NAME	PRINCIPAL INGREDIENTS	GENERAL USE
Pomodust	Sulphur and Lead Arsenate. <span style="float: right;">In bags.</span>	Dormant Dusting for San Jose Scale and Peach Leaf Curl.
Sulfodust	Dusting Sulphur and Special spreader and sticker. <span style="float: right;">In bags</span>	For Apple Scab, Brown Rot, etc. Standard fruit dust fungicide.
80-10-10	Sulphur, Lead Arsenate and Lime. <span style="float: right;">In bags</span>	For Brown Rot, Scab and Curculio on Peaches and similar fruits.
85-15	Sulphur and Lead Arsenate. <span style="float: right;">In bags</span>	For Calyx Dust on Apples, for Codling Moths, Strawberry Weevil and other chewing insects.
All-in-One	Sulphur, Lead Arsenate and impregnated Nicotine Sulphate. <span style="float: right;">In metal drums</span>	For garden purposes. A combined dust for fungi, chewing insects and sucking insects.
Fifty-fifty	Lead Arsenate and Sulphur. <span style="float: right;">In bags</span>	For Leaf Roller on Apples, also Cabbage worms, etc.
D-11 Mixture	High percentage of quickly volatile Nicotine fumes. <span style="float: right;">In metal drums</span>	For Aphids, Red Bugs, Pear Psylla, etc. The best contact dust for sucking insects.
Special 68	Dehydrated Copper Sulphate, Lime, and Lead Arsenate. <span style="float: right;">In metal drums</span>	For Apples and Grapes, copper fungicide and poison.
Special 88	Dehydrated Copper Sulphate 15 per cent, Lime and filler. <span style="float: right;">In metal drums</span>	For Celery dusting in the seed beds, Melons, etc.
D-6 Mixture (Potato Dust)	Dehydrated Copper Sulphate, 20 per cent Lime and filler. <span style="float: right;">In metal drums</span>	For Potato dusting, copper fungicide only. Principally for Blight control and field dusting of Celery.
D-18 Mixture	Dehydrated Copper Sulphate 20 per cent. Calcium Arsenate (Poison) 25 per cent, Lime and filler. <span style="float: right;">In metal drums</span>	For Potato bugs and Blight, copper fungicide and poison. Standard potato mixture.

### ARCO 834—BLACK

A plastic material for glazing and caulking. Especially desirable for factory and greenhouse work.

### ARCO 835—WHITE

Arco 835 is a plastic glazing material applied with an Arco Glazing Gun for glazing and bedding skylights or upright glass in metal or wood sash.

### The Arco Glazing Gun

The Arco Glazing Gun is an aid to the window glazer. It saves time and energy; about five times as much sash can be glazed with this gun as with the ordinary putty knife. Price \$4.50.

PUTTY BULBS .....\$1.25

### Tree Tanglefoot

PRICE TO CONSUMERS

1-lb. packages .....\$0.60 each  
 5-lb. packages ..... 2.75 each  
 10-lb. packages ..... 5.25 each  
 25-lb. packages .....11.00 each

The 1, 5 and 10-lb. sizes are lithographed cans —the 25-lb. size is a wooden pail.

Modern Florists, Growers  
and Greenhouse Men Prefer

## DUROPLASTIC

*Famous Plastic Asbestos  
Glazing Cement*

**DURABLE  
DEPENDABLE  
WATER-PROOF  
WEATHER-PROOF  
EVER-ELASTIC**

*Guaranteed to Outlast Putty  
Three to Four Times*

Manufactured and Guaranteed by

**GRAND RAPIDS GROWERS  
ASSOCIATION**

Distributors

GRAND RAPIDS, MICHIGAN

# Grasselli Spray Materials

## GRASSELLI LIME SULPHUR SOLUTION

A clear, cherry-colored liquid used as an insecticide to control San Jose Scale, Bitternute and similar sucking and scale insects, also as a fungicide, principally on apples.

## GRASSELLI DRY LIME SULPHUR

Same as the Solution, but without the water. Particularly suitable for the small user.

## GRASSELLI ARSENATE OF LEAD (Either Paste or Powder)

An arsenical poison used to destroy most leaf eating insects. Directions that follow are based on Powdered Arsenate of Lead. If Arsenate of Lead Paste is used, double the amounts given.

## GRASSELLI CALCIUM ARSENATE POWDER

An arsenical powder especially recommended for use on potatoes and other hardy vegetables to destroy leaf eating insects.

## GRASSELLI BORDEAUX MIXTURE POWDER

A reliable fungicide recommended to prevent potato blight, bitter-rot and similar diseases. This product, being a fungicide, should be applied in advance of the period of infection. Bordeaux Mixture Powder may be used with either Arsenate of Lead or Calcium Arsenate, combining treatment for insects and fungous diseases in one application.

## GRASSELLI CASEIN SPREADER

Improves spreading and adhesive qualities of spray materials.

# Spray Schedules

## VEGETABLES

**ASPARAGUS:** The asparagus beetle and slugs eat the tender stalks and foliage. They are readily destroyed by spraying the plants with Arsenate of Lead Powder—two level tablespoonfuls to one gallon of water, applied with a suitable sprayer in a fine mist. Repeat applications as often as beetles appear. For dusting, use one part Arsenate of Lead Powder to four parts of Powdered Lime. Dust on the foliage when the dew is on the plants.

**BEANS and PEAS:** These vegetables are subject to Blight and Pod Spot known as Anthracnose. To avoid Pod Spot select seeds that are not discolored, and plants having black spots should be pulled out and burned. As soon as the plants come up, begin spraying with Bordeaux Mixture Powder. Cover the plant thoroughly, and repeat application at intervals of ten days. Use Bordeaux Mixture Powder at the rate of 6 to 8 tablespoonfuls to a gallon of water. In wet seasons plants are often attacked by slugs which eat the foliage at night. To control these use a level tablespoonful of Arsenate of Lead Powder to one gallon of water, or dust with equal parts of Arsenate of Lead and Lime.

**CABBAGE, CAULIFLOWER, ETC.:** The most common insect that attacks plants of this form is the Cabbage Worm. As soon as the worms appear spray the plants with Arsenate of Lead Powder—two tablespoonfuls to a gallon of water—then spray at intervals of one week until the plants begin to head. If Aphid appear, spray with Sulphate of Nicotine 40%—one teaspoonful to a gallon of water, to which has been added a small amount of soap. Repeat as often as necessary to destroy this sucking insect. Apply in a thin mist, and thoroughly, so as to hit the insects, as they can only be destroyed by contact.

**BEETS, SWISS CHARD:** About the only injury that these plants are susceptible to is Leaf Spot, which, being a fungous disease, is prevented by the use of Bordeaux Mixture Powder. Apply in advance of the period of infection, and repeat applications as often as is necessary to cover new growth. Use 6 to 8 tablespoonfuls to a gallon of water.

**CELERY:** Leaf Spot and Blight are most common troubles. Spray with Bordeaux Mixture Powder. If leaf eating insects are present, add two tablespoonfuls of Arsenate of Lead to each gallon of water.

**CORN:** The Corn Ear Worm is the most troublesome pest, which feeds on the silk and later on the young kernels. Frequent applications of Arsenate of Lead Powder—two tablespoonfuls to a gallon of water—sprayed on the silk before the caterpillar works back on to the kernels will eliminate these pests. Spray frequently, as there are several different broods a year.

**CUCUMBERS, CANTELOUPES, SQUASH:** The striped Cucumber Beetle is the most troublesome pest that attacks the above plants. As soon as the beetles appear, spray the plants with Arsenate of Lead Powder, using two tablespoonfuls to one gallon of water. Recent experiments indicate that good control is obtained by dusting the plants with Calcium Arsenate and land plaster or Hydrated Lime. One part of Calcium Arsenate Powder to 15 to 20 parts of land plaster. The pickle and melon worms are killed by spraying the plants at the time the first blossom buds begin to form, and continue to spray at frequent intervals. To prevent mildew, spray the plants thoroughly with Bordeaux Mixture Powder. Squash bugs and Aphid can be controlled by spraying with Sulphate of Nicotine—1 teaspoonful to one gallon of water. Cover the plants thoroughly with a fine mist.

**ONIONS:** Thrips cause whitening and dying of tops. This is prevented by spraying the plants with Sulphate of Nicotine—one teaspoonful to a gallon of water, using a fine mist so as to cover plants thoroughly.

**POTATOES:** The Colorado Beetle (potato bug) and slugs are the most disastrous of garden insects. They attack the foliage and in a short time destroy the plant. As soon as the striped beetle or hard shell, as they are commonly called, put in their appearance, spray the plants with 6 to 8 tablespoonfuls of Arsenate of Lead or Calcium Arsenate to one gallon of water. Repeat spraying at frequent intervals in order to destroy the slugs, which are easily killed when they are young. Blight is a disease that proves very troublesome and can only be prevented by spraying with Bordeaux Mixture Powder—6 to 8 tablespoonfuls to a gallon of water. This application also helps to control flea beetles. Begin spraying as soon as plants are about six inches high, and spray at frequent intervals in order to cover the new growth.

**TOMATOES:** Tomato Worms eat the foliage, and prove very disastrous. They can be destroyed by spraying the plants with Arsenate of Lead Powder—6 to 8 tablespoonfuls to a gallon of water. Leaf Spots and similar fungous diseases can be prevented by spraying with Bordeaux Mixture Powder—6 to 8 tablespoonfuls to a gallon of water.

**CUT-WORMS:** Young plants are usually attacked by a worm that works on the lower part of the plant or just under the surface of the ground. Plants may be protected by the use of a small paper collar set around the plant and extending a little below the surface of the ground. Poison Bait is also a control measure, and should be spread over the ground around the infested plants.

## FLOWERS and SHRUBBERY

**FLOWERS and SHRUBBERY:** Most hardy flowers are benefited by spraying with Bordeaux Mixture Powder. When leaf eating insects appear, combine Arsenate of Lead with the above application. In case of Aphid or Ants, use Sulphate of Nicotine. Shrubbery should be sprayed while in the dormant stage with Lime Sulphur Solution in order to control scale.

**ROSES:** Roses are frequently infested with plant lice, which are destroyed by contact poison—1 teaspoonful Sulphate of Nicotine to one gallon of water, to which has been added enough soap to make suds. Spray at repeated intervals in order to keep bushes clean.

**ROSE CHAFER:** Rose bugs are difficult to kill, but can be controlled by spraying with 6 to 8 tablespoonfuls of Arsenate of Lead to one gallon of water, to which has been added two tablespoonfuls of sugar or molasses. Mildew can be controlled by spraying with Lime Sulphur Solution—¼ pint to one gallon of water. Spray bushes as soon as this appears.

## TREES

**SHADE TREES:** Leaf eating insects do a great deal of damage to our shade trees. Among the most troublesome are the Tussock Moth, Elm Leaf Beetle, Gypsy and Brown Tail Moth. To destroy these and similar leaf eating insects apply Arsenate of Lead Powder or Calcium Arsenate Powder—1½ to 2½ pounds to fifty gallons of water—as soon as the insects begin to feed on the foliage.

**FRUIT TREES:** For the control of the San Jose Scale and similar sucking insects, spray the trees when they are dormant with Lime Sulphur Solution—1 gallon to 7 to 9 gallons of water. After buds open, and at frequent intervals, in order to control the Codling Moth and leaf eating insects, spray with Arsenate of Lead Powder—1 pound to fifty gallons of water—and if Aphid are present, add to the above combination one-half pound Sulphate of Nicotine to fifty gallons of dilute spray.

Write for special booklet on spraying fruit trees and berry bushes.

## VINES

### GRAPES:

**First application—**Just before blossoms open use 8 pounds Grasselli Bordeaux Mixture Powder and 1½ to 2½ pounds of Arsenate of Lead Powder to fifty gallons of water.

**Second application—**Immediately after the blossoms fall—same as first.

**Third application—**About ten days after second—same as first.

### STRAWBERRIES:

**First application—**About three weeks before blossoms appear, use Bordeaux Mixture Powder, 8 pounds to fifty gallons of water, with 1½ pounds of Grasselli Arsenate of Lead Powder added.

**Second application—**Same as first, just before the blossoms open.

### BLACKBERRIES and RASPBERRIES:

**First application—**Just before leaf buds open, use Grasselli Lime Sulphur Solution, 1 gallon to 9 gallons of water, or Grasselli Bordeaux Mixture Powder, 8 pounds to 50 gallons of water.

**Second application—**After the leaves are well developed, use Grasselli Bordeaux Mixture Powder, 8 pounds to 50 gallons of water, with 1½ pounds Grasselli Arsenate of Lead Powder added.

**Third application—**Just before blossoms appear, same as second.

# Irrigation Equipment

In buying irrigation equipment, as in buying any piece of machinery, attention should be given to the details of design and construction that are indicative of good equipment. It is these same details and high quality of material and workmanship that pave the way for lasting service. Built with care and precision, we can offer you equipment that will last. We have at our disposal a large tract of irrigation, managed by one of the oldest overhead irrigation users in the country, and it is here that we have culled defects and added improvements that are a lasting benefit to the buyer, and a final insur-

ance that our products are the products you desire to use.

Wherever there is water and iron there is bound to be rust, and with rust there is a multitude of dissatisfaction. In order to remove this disagreeable feature, we have adopted the use of Brass in our constructions wherever possible. Thus our equipment can be depended upon to give lasting service year after year, and to retain its smooth action and efficient distribution of water almost permanently.

At the same time our prices are no higher, in many cases lower, and we can assure you the latest and best in overhead when you sign our order.

# Equipment Used on March Automatic Irrigation Company's Installations

## March Patented Oscillating Motor

This is the Motor that has Revolutionized Irrigation

The leading and largest commercial growers, as well as Professors and Teachers in the biggest Agricultural Colleges and experts on the U. S. Government Experimental farms agree on the success of MARCH AUTOMATIC IRRIGATION. It has been tried and used from Coast to Coast. All have agreed that an efficient automatic oscillating pipe line is a necessary and needed factor for the most profitable agriculture.

The success of the MARCH OSCILLATING MOTOR has been phenomenal. A trial quickly convinced the skeptical that here was a fool-proof motor. One that would work on very low pressure, and still operate successfully and turn long lines. Just 25 lbs. pressure needed to turn a 500-ft. line. Only 40 lbs. needed to turn an 800-ft. line. Most other oscillators just begin to function with a minimum of 30 lbs. or more.

This motor will oscillate your line, turning the streams of water back and forth with a constant even swing and without one bit of attention. An absolute water distribution is thus obtained. The result can in no way be gained or compared with hand turned lines.

Model F lines up to 350 ft. long ..... \$25.00  
 Model D (heavy duty) for lines 350 to 800 feet ..... 30.00

## The Exclusive Patented March Nozzles and Screens

OVERCOME ALL GROWERS TROUBLES

Since overhead irrigation was first used, in field, garden or greenhouse, users were seriously troubled with clogged nozzles. Keeping them clean and functioning so that every bit of ground would get its moisture and result in a maximum yield, kept the grower continually on the jump. It was a serious and expensive annoyance, for the many who had sand in their mains, or other foreign matter in the lines.

Line screens in the turning union did not help much, and also needed continual cleaning. Many growers walked the lines each day the water was used, to run a pin or wire in the clogged nozzle. This was before the advent of the MARCH SCREENED NOZZLE.

Users Get From Two to Three Years' Uninterrupted Service

The above service is common amongst growers. Hundreds of thousands of March Nozzles have been inserted in place of other nozzles. The owners are saving in labor alone many times their cost each season.

Just Bend the Tip and Get Your Water Streams in Line

The March Field Nozzle. Think of being able to true up your streams by taking hammer or pliers and bending all nozzles in line. You then get a real watering job. Every bit of space covered. There are no dry spots, from streams falling short. Also there is no particular fuss or bother to couple pipe lengths together if you have our nozzles. Holes need not line up exactly as with other nozzles.

Field nozzle, all screened, per 100 ..... \$11.00  
 Field nozzle, not screened, per 100 ..... 6.00

## March Automatic Oscillating Rain Machine

Our Portable Machines are being used today in preference to any other type of sprinkler on many golf courses, parks, cemeteries and estates. Florists are finding them invaluable over carnations and other crops that need water for a short period of time. One crop pays for them.

BABY GRAND RAIN MACHINE, 16 Nozzles ..... \$30.00  
 BABY GRAND CEMETERY MACHINE, 24 Nozzles ..... 35.00  
 BABY GRAND FIELD MACHINE, 30 Nozzles ..... 40.00  
 All F.O.B. Grand Rapids.

## Roller-Bearing Pipe Carriers

This roller is always tight on the pipe and eliminates reaming the pipe support when installed. A turn or two with a wrench and it is on, another turn and it is off. This special fastening on the pipe carrier is found only on our hanger. The roller bearing pipe carriers are for three types of support; Wood Posts, Iron Pipe, and Wire or Cable for greenhouse work. These hangers are Solid Brass, non-tipping rollers, with double bearing axle through the roller. A roller that can't rust tight and cut your pipe. Each, 40 cents, F.O.B. Grand Rapids.

## Skinner Irrigation Supplies

The Skinner System is one of the most improved methods of irrigation, and is used outdoors on gardens, lawns, etc., as well as for greenhouse work. Write for booklet.

Model A Drilling Machine ..... \$11.70  
 Model B Drilling Machine ..... 14.70  
 Large Tap Drills, 5-16-24, each ..... .45  
 Small Tap Drills, 12-24, each ..... .35  
 Silver Stream Outdoor Nozzles, each ..... .06  
 Silver Stream Indoor Nozzles, each ..... .08½  
 Greenhouse Nozzles, ST-50, 10 ft. throw, each ..... .09½  
 Greenhouse Nozzles, ST-70, 12½ ft. throw, each ..... .09½

### UNIONS

### Fittings

	Tee	Cross
No. E—Inlet 1 in. Outlet ¾ to 1 in. ....	\$2.50	\$2.95
No. N—Inlet 1¼ in. Outlet 1¼ in. ....	3.50	3.75
No. R—Inlet 1½ in. Outlet 1½ in. ....	3.95	4.65
No. S—Inlet 2 in. Outlet 2 in. ....	4.85	5.85

We would like to have you call and see us about this system. Tell us your plans.

	Each
No. 1 Pipe Hangers .....	\$0.28
No. 2 Pipe Hangers .....	.28
No. 3 Pipe Hangers .....	.33
No. 4 Pipe Hangers .....	.33
No. ¾ inch Flush Valves .....	1.25
No. 1 Strainers for 1-inch Union .....	.24
No. 2 Strainers for 1½-inch Union .....	.28



Our Grass Seeds Make the Finest Lawns

## Lawns and Lawn Grass Seeds

There is nothing which adds more to the external attractiveness of a home than a beautiful lawn. You may have such by providing the right conditions.

To obtain a good lawn it is very essential that care be used in selecting the seed. Many people are under the impression that there is danger in getting weed seed in lawn mixtures. This impression no doubt has been formed because it is a common practice to top dress with rich dirt taken from some location that has not been under cultivation; hence contains the seeds that are common to that locality. When such soil is used, it should be cultivated long enough to free it from weed seeds; then sow a reliable lawn mixture, when better results will be obtained than by sodding, and at much less expense.

To start a new lawn from seeding, have the soil thoroughly spaded up, enriched with commercial fertilizer (3-8-6, see page 28), or better still with pulverized hen manure. (See page 28.) Level and roll it well to make it compact. Select a still, damp day for seeding; sow one-half of the seed from North to

South, and half from East to West; rake it over and roll again. When the grass comes up, replant bare or thin spots.

After the lawn is started, it still needs attention, as does the old lawn. Lawn Grass is a voracious feeder, and must have the elements necessary to its growth. While stable manure contains these elements, its unpleasant features, unsightliness, odor and weed seeds combine to make it highly objectionable.

Pulverized Hen Manure (See page 29), supplies the plant food in a concentrated form, without the objectionable features. Hen Manure contains nearly twice the amount of plant foods that Pulverized Sheep Manure does, and is not so smelly. It is easy to apply and is a balanced ration for grass. Most of the sunny lawns need lime, as Kentucky Blue Grass and White Clover do not thrive in a sour soil. An application of 100 pounds of Hydrated Lime (See page 29), will be very beneficial. For shady lawn, would advise the sowing of different seed. Our Shady Lawn Grass is composed of grasses that will grow in some shade, and that do better on acid soil.

### Lawn Grass Seed

**Sunny Lawn Mixture** This mixture contains no annual grasses, but only those of lasting value and hardiness, and will produce an even, dense growth of permanent sward, which improves in velvety density with age. Write for prices.

**Shady Lawn Mixture** Will make a dense, thick growth in light soils, and will make a very satisfactory lawn even in shady situations. This mixture is composed mostly of imported grasses, several of them quite expensive. Write for prices.

**GRAND RAPIDS GROWERS' ASSOCIATION**  
**GRAND RAPIDS, MICHIGAN**